



THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

Grant H. Torrey Jr. for GHS, Inc.

Whereas, THERE HAS BEEN PRESENTED TO THE

Secretary of Agriculture

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED DISTINCT VARIETY OF SEXUALLY REPRODUCED, OR TUBER PROPAGATED PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF; AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF TWENTY YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC REPLENISHMENT OF VIABLE BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITORY AS PROVIDED BY LAW, THE RIGHT TO EXCLUDE OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, OR PROPAGATING IT, OR EXPORTING IT, OR CONDITIONING IT FOR PROPAGATION, OR STOCKING IT FOR ANY OF THE ABOVE PURPOSES, OR CONDITIONING IT FOR PROPAGATION, OR STOCKING IT FOR ANY OF THE ABOVE PURPOSES, OR USING IT IN PRODUCING A HYBRID OR DIFFERENT VARIETY THEREFROM, TO THE EXTENT PROVIDED BY THE PLANT VARIETY PROTECTION ACT. IN THE UNITED STATES SEED OF THIS VARIETY SHALL BE SOLD BY VARIETY NAME ONLY AS A CLASS OF CERTIFIED SEED AND (2) SHALL CONFORM TO THE NUMERICAL REQUIREMENTS SPECIFIED BY THE OWNER OF THE RIGHTS. (84 STAT. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

WHEAT, COMMON

'Albion'

In Testimony Whereof, I have hereunto set my hand and caused the seal of the Plant Variety Protection Office to be affixed at the City of Washington, D.C. this twenty-third day of March, in the year two thousand and five.

Attest:

[Signature]
Commissioner
Plant Variety Protection Office
Agricultural Marketing Service

[Signature]
Secretary of Agriculture



U.S. DEPARTMENT OF AGRICULTURE
 AGRICULTURAL MARKETING SERVICE
 SCIENCE AND TECHNOLOGY - PLANT VARIETY PROTECTION OFFICE

The following statements are made in accordance with the Privacy Act of 1974 (5 U.S.C. 552a) and the Paperwork Reduction Act (PRA) of 1995.

Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). Information is held confidential until certificate is issued (7 U.S.C. 2426).

APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE
 (Instructions and information collection burden statement on reverse)

1. NAME OF OWNER Genex Harvest States Wheeler Branch and Grant H. Torrey, Jr. for CHS, Inc.		2. TEMPORARY DESIGNATION OR EXPERIMENTAL NAME 123-M	3. VARIETY NAME Albion
4. ADDRESS (Street and No., or R.F.D. No., City, State, and ZIP Code, and Country) 3132 Road "O" N.E. Moses Lake, WA. 98837		5. TELEPHONE (include area code) 509-765-3898	FOR OFFICIAL USE ONLY PVPO NUMBER 9900146
7. IF THE OWNER NAMED IS NOT A "PERSON", GIVE FORM OF ORGANIZATION (corporation, partnership, association, etc.) Cooperative		6. FAX (include area code)	FILING DATE January 25, 1999
8. IF INCORPORATED, GIVE STATE OF INCORPORATION		9. DATE OF INCORPORATION	
10. NAME AND ADDRESS OF OWNER REPRESENTATIVE(S) TO SERVE IN THIS APPLICATION. (First person listed will receive all papers) Grant H. Torrey, Jr. c/o Cenex Harvest States-Wheeler Branch 3132 Road "O" N.E. Moses Lake, WA. 98837			FILING AND EXAMINATION FEES: \$ 2400.00 DATE 12/23/98 CERTIFICATION FEE: \$ 432.00 DATE 9/27/2004

11. TELEPHONE (include area code) 509-765-3898	12. FAX (include area code) 509-765-8684	13. E_MAIL wheeler@csmwheeler.com	14. CROP KIND (Common Name) Wheat, Common
15. GENUS AND SPECIES NAME OF CROP Triticum Aestivum		16. FAMILY NAME (Botanical) Gramineae	17. IS THE VARIETY A FIRST GENERATION HYBRID? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO

18. CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED (Follow instructions on reverse) a. <input checked="" type="checkbox"/> Exhibit A. Origin and Breeding History of the Variety b. <input checked="" type="checkbox"/> Exhibit B. Statement of Distinctness c. <input checked="" type="checkbox"/> Exhibit C. Objective Description of Variety d. <input checked="" type="checkbox"/> Exhibit D. Additional Description of the Variety (Optional) e. <input checked="" type="checkbox"/> Exhibit E. Statement of the Basis of the Owner's Ownership f. <input type="checkbox"/> Voucher Sample (2,500 viable untreated seeds or, for tuber propagated varieties, verification that tissue culture will be deposited and maintained in an approved public repository) g. <input type="checkbox"/> Filing and Examination Fee (\$2,450), made payable to "Treasurer of the United States" (Mail to the Plant Variety Protection Office)	19. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE SOLD AS A CLASS OF CERTIFIED SEED? See Section 83(a) of the Plant Variety Protection Act <input checked="" type="checkbox"/> YES (If "yes", answer items 20 and 21 below) <input type="checkbox"/> NO (If "no," go to item 22)
	20. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE LIMITED AS TO NUMBER OF GENERATIONS? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
21. IF "YES" TO ITEM 20, WHICH CLASSES OF PRODUCTION BEYOND BREEDER SEED? <input checked="" type="checkbox"/> FOUNDATION <input checked="" type="checkbox"/> REGISTERED <input checked="" type="checkbox"/> CERTIFIED	

22. HAS THE VARIETY (INCLUDING ANY HARVESTED MATERIAL) OR A HYBRID PRODUCED FROM THIS VARIETY BEEN SOLD, DISPOSED OF, TRANSFERRED, OR USED IN THE U. S. OR OTHER COUNTRIES? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO IF YES, YOU MUST PROVIDE THE DATE OF FIRST SALE, DISPOSITION, TRANSFER, OR USE FOR EACH COUNTRY AND THE CIRCUMSTANCES. (Please use space indicated on reverse.)	23. IS THE VARIETY OR ANY COMPONENT OF THE VARIETY PROTECTED BY INTELLECTUAL PROPERTY RIGHT (PLANT BREEDER'S RIGHT OR PATENT)? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO IF YES, PLEASE GIVE COUNTRY, DATE OF FILING OR ISSUANCE AND ASSIGNED REFERENCE NUMBER. (Please use space indicated on reverse.)
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24. The owners declare that a viable sample of basic seed of the variety will be furnished with application and will be replenished upon request in accordance with such regulations as may be applicable, or for a tuber propagated variety a tissue culture will be deposited in a public repository and maintained for the duration of the certificate.

The undersigned owner(s) is(are) the owner of this sexually reproduced or tuber propagated plant variety, and believe(s) that the variety is new, distinct, uniform, and stable as required in Section 42, and is entitled to protection under the provisions of Section 42 of the Plant Variety Protection Act.

Owner(s) is(are) informed that false representation herein can jeopardize protection and result in penalties.

SIGNATURE OF OWNER 		SIGNATURE OF OWNER	
NAME (Please print or type) Grant H. Torrey, Jr.		NAME (Please print or type)	
CAPACITY OR TITLE Seed Plant Manager	DATE July 13, 2000	CAPACITY OR TITLE	DATE

INSTRUCTIONS

9900146

GENERAL: To be effectively filed with the Plant Variety Protection Office (PVPO), ALL of the following items must be received in the PVPO: (1) Completed application form signed by the owner; (2) completed exhibits A, B, C, E; (3) for a seed reproduced variety at least 2,500 viable untreated seeds, for a hybrid variety at least 2,500 untreated seeds of each line necessary to reproduce the variety, or for tuber reproduced varieties verification that a viable (*in the sense that it will reproduce an entire plant*) tissue culture will be deposited and maintained in an approved public repository; (4) check drawn on a U.S. bank for \$2,450 (\$300 filing fee and \$2,150 examination fee), payable to "Treasurer of the United States" (See Section 97.6 of the Regulations and Rules of Practice.) Partial applications will be held in the PVPO for not more than 90 days, then returned to the applicant as unfiled. Mail application and other requirements to Plant Variety Protection Office, AMS, USDA, Room 500, NAL Building, 10301 Baltimore Avenue, Beltsville, MD 20705-2351. Retain one copy for your files. All items on the face of the application are self explanatory unless noted below. Corrections on the application form and exhibits must be initialed and dated. DO NOT use masking materials to make corrections. If a certificate is allowed, you will be requested to send a check payable to "Treasurer of the United States" in the amount of \$300 for issuance of the certificate. Certificates will be issued to owner, not licensee or agent.

Plant Variety Protection Office

Telephone: (301) 504-5518

FAX: (301) 504-5291

Homepage: <http://www.ams.usda.gov/science/pvp.htm>

ITEM

- 18a. Give: (1) the genealogy, including public and commercial varieties, lines, or clones used, and the breeding method; (2) the details of subsequent stages of selection and multiplication; (3) evidence of uniformity and stability; and (4) the type and frequency of variants during reproduction and multiplication and state how these variants may be identified
- 18b. Give a summary of the variety's distinctness. Clearly state how this application variety may be distinguished from all other varieties in the same crop. If the new variety is most similar to one variety or a group of related varieties:
- (1) identify these varieties and state all differences objectively;
 - (2) attach statistical data for characters expressed numerically and demonstrate that these are clear differences; and
 - (3) submit, if helpful, seed and plant specimens or photographs (prints) of seed and plant comparisons which clearly indicate distinctness
- 18c. Exhibit C forms are available from the PVPO Office for most crops; specify crop kind. Fill in Exhibit C (Objective Description of Variety) form as completely as possible to describe your variety.
- 18d. Optional additional characteristics and/or photographs. Describe any additional characteristics that cannot be accurately conveyed in Exhibit C. Use comparative varieties as is necessary to reveal more accurately the characteristics that are difficult to describe, such as plant habit, plant color, disease resistance, etc.
- 18e. Section 52(5) of the Act requires applicants to furnish a statement of the basis of the applicant's ownership. An Exhibit E form is available from the PVPO.
19. If "Yes" is specified (*seed of this variety be sold by variety name only, as a class of certified seed*), the applicant MAY NOT reverse this affirmative decision after the variety has been sold and so labeled, the decision published, or the certificate issued. However, if "No" has been specified, the applicant may change the choice. (See Regulations and Rules of Practice, Section 97.103).
22. See Sections 41, 42, and 43 of the Act and Section 97.5 of the regulations for eligibility requirements.
23. See Section 5.5 of the Act for instructions on claiming the benefit of an earlier filing date.

22. CONTINUED FROM FRONT (Please provide the date of first sale, disposition, transfer, or use for each country and the circumstances, if the variety including any harvested material) or a hybrid produced from this variety has been sold, disposed of, transferred, or used in the U.S. or other countries.)

U.S.A. sales of Albion in September of 1998.

3. CONTINUED FROM FRONT (Please give the country, date of filing or issuance, and assigned reference number, if the variety or any component of the variety is protected by intellectual property right (Plant Breeder's Right or Patent).)

NOTES: It is the responsibility of the applicant/owner to keep the PVPO informed of any changes of address or change of ownership or assignment or owner's representative during the life of the application/certificate. There is no charge for filing a change of address. The fee for filing a change of ownership or assignment or any modification of owner's name is specified in Section 97.175 of the regulations. (See Section 101 of the Act, and Sections 97.130, 97.131, 97.175(h) of the Regulations and Rules of Practice.)

To avoid conflict with other variety names in use, the applicant must check the variety names proposed by contacting: Seed Branch, AMS, USDA, Room 213, Building 306, Beltsville Agricultural Research Center—East, Beltsville, MD 20705. Telephone: (301) 504-8089.

Public reporting burden for this collection of information is estimated to average 30 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Department of Agriculture, Clearance Officer, OIRM, AG Box 7630, Jamie L. Whitten Building, Washington, D.C. 20250. When replying, refer to OMB No. 0581-0055 and form number in your letter. Under the PRA of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

The U.S. Department of Agriculture (USDA) prohibits discrimination in its programs on the basis of race, color, national origin, sex, religion, age, disability, political beliefs, and marital or familial status (Not all prohibited bases apply to all programs). Persons with disabilities who require alternative means for communication of program information (braille, large print, audiotape, etc.) should contact the USDA Office of Communications at (202) 720-2791. To file a complaint, write the Secretary of Agriculture, U.S. Department of Agriculture, Washington, D.C. 20250, or call (202) 720-7327 (voice) or (202) 720-1127 (TDD). USDA is an equal opportunity employer.

ST-470 (6-98) designed by the Plant Variety Protection Office with WordPerfect 6.0a Replaces STD-470 (03-96) which is obsolete.

Item 16a.

Albion soft White winter wheat (formally experimental designation 123-M) is a selection from a conventional back-cross of the variety Basin, used as the female, and the variety Stephens, used as the male. The resulting F/1 plant that occurred (Basin height with the waxy, blue green color of Stephens) was used as the female. The pollen from the Pacific Northwest varieties Lewjain, Hill-81, Cashup, Daws and Stephens were introduced into the unique plant on individual heads.

These individual heads were planted separately to produce the F/1 generation. These individual seeds harvested were then again planted into rows to produce the F/2's. This production produced segregation.

The selections were space planted into a research nursery. The selection of 123-M was based on height and the absence of Leaf (Puccinia recondita) and Stripe (Puccinia striiformis) rust that were present on other plants in the plot of 123. These selected plants were space planted to produce the F/3 generation in 1989.

Plants were then selected from the F/4 for bulking purposes and to establish yield and agronomic characteristics.

The resulting F/5 generation segregated and heads from uniform plants were selected to head-row and establish uniformity.

The F/6 generation threw a 6-12" taller plant that headed earlier and not consistent with the majority of the plants. Heads were selected from uniform plants to head-row.

These head-rows were somewhat more stable, but the tall, earlier heading plants were occurring in the F/7 generation at the frequency of 1,600 to 3,200 plants per acre. Selection of heads from uniform plants for head-rowing was done again to produce the F/8 generation. The tall, earlier variant frequency was reduced to 420-800 plants per acre.

The F/9 production was rouged for the tall variant and harvested as the variety 123-M. This seed was bulked and planted in an isolated production field and in research nursery plots in 1996.

The resulting F/10 generation was bulked and sown in a 2.5 acre seed production field and entered into the 1996-97 Washington State Uniform Variety Trials. This seed production field was inspected by the Washington Crop Improvement Association and harvested as Foundation 123-M. 1997 was when the stability and uniformity was established in the variety "Albion". Heads were harvested from this production and supplied to the Foundation Seed Service to produce Breeder's seed for 1998. From this and successive production no variants were observed.

Albion is the selected name for the experimental line 123-M. This name was selected in June 1998 for a small town bearing that name located in the Palouse region of Washington State.

Through the purification process described, Albion has been a stable and uniform variety in its agronomic appearance and performance across the Soft White Winter wheat production areas of the Pacific Northwest since 1997.

Albion is best adapted to the lower (12") to higher (28") rainfall Soft White Winter wheat production areas of the Pacific Northwest.

CHS-Wheeler (formally Cenex Harvest States-Wheeler Branch) and Grant H. Torrey, Jr. will maintain breeder seed and the certified classes shall be: Foundation, Registered and Certified. The "Certified Option" will not be selected.

Item 16b.

Albion is a semi-dwarf, white chaffed, common soft white Winter wheat that seed is ovate, rounded and medium in length. The germ is mid-sized and not collared, the brush is medium in length, and the crease is narrow and the depth shallow. *'Albion' is most similar to 'Daws'.*

MAH
8-16-2004

Albion seed most closely resembles the seed of the variety Daws. Albion's germ is oblong versus Daws is large oblong. Albion's has many kernels off center and are white/chalky in color where as Daw's has symmetrical kernel shape with many vitreous kernels. Albion is medium to heavy brush versus Daw's heavy brush.

This description was obtained from Scott J. Cooley, USDA, GIPSA, FGIS, Quality Assurance Specialist for the Washington Federal/State Office. The comparisons was done from seed that was raised on similar production, obtained from the WSCIA Foundation Seed Service

Glumes are white with the shoulder and beak apiculate in shape, medium in length and width. When mature, the heads are hard to distinguish between Albion and Daws as the tapering shape and awn length are very similar.

Albion peduncle length is 16.4 cm, leaf width is 10.3 mm, 1st node @ 18 cm, 2nd node @ 35cm, 3rd node @ 35 cm and the flag leaf length is 17.4 cm. Compared to Daws peduncle length is 17.3 cm, leaf width is 10.3 mm, 1st node @ 10.2 cm, 2nd node @ 23 cm, 3rd node @ 48.5 cm and the flag leaf length is 18.1 cm. Albion is 22 cm shorter than Daws in all productions areas. The measurements represent the primary stalk of each individual plants from the Moses Lake, WA irrigated nurseries.

Albion is similar to Daws in their disease resistance to Cephalosporium Stripe (Cephalosporium gramineum), Dwarf Bunt (T. controversa) and Stripe Rust (Puccinia striiformis). Albion is susceptible to Powdery Mildew (Erysiphe graminis f. sp. Tririci) and where as Daws is resistant.

Albion yields are 12.8% superior with the test weight being 1 pound per bushel less than Daws. Albion is a winter-hardy variety which is similar to Daws (9 out of 10). The emergence of Albion is early to moderate whereas Daws is slow.

Albion is an early maturing, easy threshing, high yielding Soft White winter wheat that is very winter-hardy and best adapted to the production areas of the Pacific Northwest. Albion has acceptable milling and baking qualities.

OBJECTIVE DESCRIPTION OF VARIETY
WHEAT (*Triticum* spp.)

NAME OF APPLICANT(S) Cenex Harvest States-Wheeler Branch & Grant H. Torrey, Jr. ADDRESS (Street and No. or R.F.D. No., City, State, and Zip Code) 3132 Road "O" N.E. Moses Lake, Wa. 98837	FOR OFFICIAL USE ONLY
	PVPO NUMBER 9900146
	VARIETY NAME Albion
	TEMPORARY OR EXPERIMENTAL DESIGNATION 123-M

PLEASE READ ALL INSTRUCTIONS CAREFULLY: Place the appropriate number that describes the varietal character of this variety in the boxes below. Place a zero in the first box (e.g. or) when number is either 99 or less or 9 or less respectively. Data for quantitative plant characters should be based on a minimum of 100 plants. Comparative data should be determined from varieties entered in the same trial. Royal Horticultural Society or any recognized color standard may be used to determine plant colors; designate system used: R.H.S.

Please answer all questions for your variety; lack of response may delay progress of your application.

1. KIND:

1=Common 2=Durum 3=Club 4=Other (SPECIFY) _____

2. VERNALIZATION:

1=Spring 2=Winter 3=Other (SPECIFY) _____

3. COLEOPTILE ANTHOCYANIN:

1=Absent 2=Present

4. JUVENILE PLANT GROWTH:

1=Prostrate 2=Semi-erect 3=Erect

5. PLANT COLOR (boot stage):

1 = Yellow-Green 2 = Green 3 = Blue-Green

6. FLAG LEAF (boot stage):

1 = Erect 2 = Recurved 1 = Not Twisted 2 = Twisted

7. EAR EMERGENCE:

Number of Days Earlier Than _____ Madsen *

Number of Days Later Than _____ Stephens *

8. ANTHHER COLOR:

1 = YELLOW 2 = PURPLE

9. PLANT HEIGHT (from soil to top of head, excluding awns):

cm Taller Than _____ Stephens *

cm Shorter Than _____ Madsen *

* Relative to a PVPO-Approved Commercial Variety Grown in the Same Trial

A. ANTHOCYANIN

1 = Absent 2 = Present

B. WAXY BLOOM

2 = Absent 2 = Present

C. HAIRINESS (last internode of rachis)

1 = Absent 2 = Present

9900146

D. INTERNODE (SPECIFY NUMBER) 3

1 = Hollow 2 = Semi-solid 3 = Solid

E. PEDUNCLE

2 = Absent 2 = Present

16 cm Length

HEAD (at Maturity):

A. DENSITY

2 = Lax 2 = Middense 3 = Dense

B. SHAPE

1 = Tapering 2 = Strap 3 = Clavate 4 = Other (SPECIFY) _____

C. CURVATURE

2 = Erect 2 = Inclined 3 = Recurved

D. AWNEDNESS

4 = Awnless 2 = Apically Awnletted 3 = Awnletted 4 = Awned

GLUMES (at Maturity):

A. COLOR

1 = White 2 = Tan 3 = Other (SPECIFY) _____

B. SHOULDER

6 = Wanting 2 = Oblique 3 = Rounded 4 = Square 5 = Elevated 6 = Apiculate

C. BEAK

3 = Obtuse 2 = Acute 3 = Acuminate

D. LENGTH

2 = Short (ca. 7mm) 2 = Medium (ca. 8mm) 3 = Long (ca. 9mm)

E. WIDTH

2 = Narrow (ca. 3mm) 2 = Medium (ca. 3.5mm) 3 = Wide (ca. 4mm)

SEED:

A. SHAPE

1 = Ovate 2 = Oval 3 = Elliptical

B. CHEEK

1 = Rounded 2 = Angular

C. BRUSH

2 = Short 2 = Medium 3 = Long

1 = Not Collared 2 = Collared

D. CREASE

3 = Width 60% or less of Kernel
2 = Width 80% or less of Kernel
3 = Width Nearly as Wide as Kernel

1 = Depth 20% or less of Kernel
2 = Depth 35% or less of Kernel
3 = Depth 50% or less of Kernel

MAH 3-12-2004

E. COLOR

1 = White 2 = Amber 3 = Red 4 = Other (SPECIFY) _____

F. TEXTURE

2 = Hard 2 = Soft

G. PHENOL REACTION (see instructions):

0 = Ivory 2 = Fawn 3 = Light Brown 4 = Dark Brown 5 = Black

14. DISEASE: (0=Not Tested; 1=Susceptible; 2=Resistant; 3=Intermediate; 4=Tolerant)
PLEASE INDICATE THE SPECIFIC RACE OR STRAIN TESTED

Stem Rust (*Puccinia graminis* f. sp. *tritici*)

4 _____

Leaf Rust (*Puccinia recondita* f. sp. *tritici*)

3 _____

Stripe Rust (*Puccinia striiformis*)

3 _____

Loose Smut (*Ustilago tritici*)

0 _____

Tan Spot (*Pyrenophora tritici-repentis*)

0 _____

Flag Smut (*Urocystis agropyri*)

0 _____

Halo Spot (*Selenophoma donacis*)

0 _____

Common Bunt (*Tilletia tritici* or *T. laevis*)

0 _____

Septoria nodorum (Glume Blotch)

0 _____

Dwarf Bunt (*Tilletia controversa*)

0 _____

Septoria avenae (Speckled Leaf Disease)

0 _____

Karnal Bunt (*Tilletia indica*)

0 _____

Septoria tritici (Speckled Leaf Blotch)

0 _____

Powdery Mildew (*Erysiphe graminis* f. sp. *tritici*)

1 _____

Scab (*Fusarium* spp.)

0 _____

"Snow Molds"

0 _____

"Black Point" (Kernel Smudge)

0 _____

Common Root Rot (*Fusarium*, *Cochliobolus* and *Bipolaris* spp.)

0 _____

Barley Yellow Dwarf Virus (BYDV)

0 _____

Rhizoctonia Root Rot (*Rhizoctonia solani*)

0 _____

Soilborne Mosaic Virus (SBMV)

0 _____

Black Chaff (*Xanthomonas campestris* pv. *translucens*)

0 _____

Wheat Yellow (Spindle Streak) Mosaic Virus

0 _____

Bacterial Leaf Blight (*Pseudomonas syringae* pv. *syringae*)

0 _____

Wheat Streak Mosaic Virus (WSMV)

0 _____

Other (SPECIFY) _____

Other (SPECIFY) Cephalosporium Stripe

2 (Cephalosporium gramineum) _____

Other (SPECIFY) _____

PLEASE SPECIFY BIOTYPE (where needed)

Hessian Fly (*Mayetiola destructor*)
 0 _____

Other (SPECIFY) _____

Stem Sawfly (*Cephus* spp.)
 0 _____

Other (SPECIFY) _____

Cereal Leaf Beetle (*Oulema melanopa*)
 0 _____

Other (SPECIFY) _____

Russian Aphid (*Diuraphis noxia*)
 0 _____

Other (SPECIFY) _____

Greenbug (*Schizaphis graminum*)
 0 _____

Other (SPECIFY) _____

Aphids
 0 _____

Other (SPECIFY) _____

16. ADDITIONAL INFORMATION ON ANY ITEM ABOVE, OR GENERAL COMMENTS:

16d.

The following trail results were performed by Washington State University-Department of Crop and Soil Sciences. These trails were performed by an unbiased entity that tests material for the education and benefit of grower/farmers in the Pacific Northwest.

Each trail location (off-station) nursery is planted near or around the locality it portrays as a testing site. These trials are sown and harvested in a randomized-block design. Each variety is sown by seed count. Each plot is trimmed to 64 sq. feet. Each entry is randomized four (4) times through each trial location.

Analysis of the data is completed by the use of the General Linear Model Procedure.. The measure of the standard deviation is at 90% confidence level for each site as well as the protein and the test weight on the WSU summaries.

The individual trails included add more data as far as lodging and Cephalosporium Stripe are reported as casual observations by the staff. The plant heights recorded are the average height of the four (4) replicated entries in each location.

We used this source for true and unbiased reporting of Albion's yield, test and bushel weights in comparison with the prevalent varieties used in the Pacific Northwest.

1999 WSU WINTER WHEAT VARIETY TRIAL SUMMARY

September 24, 1999

TEST WEIGHT (LB/BU)

VARIETY NAME	RITZVILLE	COULLEE CITY	BICKLETON	ASOTIN	FAIRFIELD	MAYVIEW	POMEROY	LIND DRY	DUSTY	FARMINGTON	REARDAN	CRESTON	ST. JOHN	WALLA WALLA	LAMONT	DAYTON	PULLMAN	VARIETY MEAN
Soft White Common																		
ALBION	60.4	60.7	59.7	56.9	57.6	56.0	59.4	60.2	60.4	56.5	58.2	61.3	58.9	60.1	59.4	58.0	57.8	58.9
BU6W93-477	58.2	59.7	59.6	58.3	58.9	57.7	61.4	61.6	61.8	55.1	56.0	61.8	59.8	62.6	60.8	59.9	58.9	59.6
BU6W93-481	58.5	59.6	58.7	58.4	59.8	58.4	61.3	61.8	60.9	54.5	55.5	62.1	59.2	61.9	61.3	60.1	59.1	59.5
CASHUP	62.4	62.3	61.4	58.2	60.0	58.7	62.1	62.0	62.9	57.1	61.0	62.5	61.3	62.2	61.4	59.3	58.7	60.7
ELTAN	62.2	62.3	60.5	58.8	59.6	58.1	59.9	61.6	62.3	58.0	59.3	61.4	60.4	60.2	59.3	59.0	58.9	60.1
ELTAN-MADSEN	61.0	62.5	59.0	57.9	59.0	57.6	60.8	61.4	62.0	56.1	59.2	61.7	59.9	61.0	60.8	59.4	58.5	59.9
HILL 81	59.5	62.1	60.3	58.3	59.6	58.6	61.5	60.9	61.8	56.5	57.5	62.3	60.5	61.4	60.8	60.0	58.6	59.9
ID 10085-5	58.8	60.1	58.8	57.1	58.7	57.3	60.4	61.0	60.9	54.8	55.3	61.3	60.2	61.5	60.5	58.8	57.9	59.0
ID10420A	60.4	62.4	60.6	57.6	59.7	58.4	61.9	61.1	62.3	57.4	57.4	61.5	60.4	61.5	60.3	59.3	58.3	60.0
LAMBERT	60.1	59.6	60.0	57.4	58.7	57.1	60.5	60.9	60.6	56.0	57.0	60.6	60.0	61.3	60.0	58.9	58.3	59.2
LEWJAIN	61.7	62.8	62.5	59.3	59.4	59.1	61.5	62.3	62.3	57.8	59.0	62.5	59.7	61.0	61.0	58.2	59.5	60.5
MACVICAR	58.3	59.5	59.1	57.1	59.5	57.1	61.5	60.9	61.8	55.0	55.4	61.8	60.0	61.4	60.3	58.8	58.6	59.2
MADSEN	58.0	60.6	59.9	57.9	58.7	58.1	61.2	60.7	62.0	55.2	55.7	62.0	60.0	60.8	60.0	59.9	58.5	59.3
MADSEN .75X#1A	58.8	61.0	60.2	58.4	58.4	58.4	61.2	60.3	61.3	54.6	55.5	62.2	60.0	60.1	60.3	60.2	58.3	59.3
MADSEN 1.5X#1A	58.9	61.0	60.1	57.9	58.7	58.2	61.1	60.4	61.4	54.3	56.4	61.8	60.1	60.6	60.1	59.8	58.3	59.3
MADSEN-ROD	59.5	61.1	59.7	57.1	58.4	57.9	60.7	60.1	61.0	54.5	57.0	61.8	59.4	60.7	59.7	59.3	58.0	59.1
MADSEN-STEPHENS	58.2	59.8	59.9	57.1	58.5	57.6	61.0	61.3	61.0	55.0	56.9	61.7	59.2	60.3	60.3	59.1	58.0	59.1
MJ-4	56.8	58.7	58.2	57.9	57.7	58.3	59.9	60.5	59.7	55.1	54.5	60.6	59.5	58.6	59.3	58.9	58.8	58.4
OR939528	57.9	60.2	58.6	56.5	57.5	56.5	60.6	60.0	61.0	54.4	55.1	61.9	57.6	60.4	59.6	58.9	57.5	58.4
Q. HYBRID 7817	57.7	60.9	58.7	57.1	58.1	56.2	60.3	60.4	60.8	53.5	55.9	60.1	57.8	61.1	59.1	57.9	58.0	58.4
Q. HYBRID 95021	56.3	58.9	57.8	57.5	56.4	57.0	60.5	60.5	60.3	54.0	55.2	60.0	57.9	60.8	60.0	58.3	57.0	58.4
ROD	59.7	61.3	59.8	56.8	57.7	57.7	60.4	60.1	60.8	53.3	57.4	61.3	58.9	59.4	58.9	57.7	58.2	58.8
STEPHENS	56.9	60.6	58.1	56.4	58.5	57.6	59.5	61.5	60.0	52.8	54.6	61.5	60.1	60.9	59.9	58.6	57.1	58.4
WA7813	61.9	62.8	61.7	57.8	59.9	58.3	62.1	62.4	63.0	57.5	58.9	62.6	61.7	61.9	60.7	59.5	59.0	60.7
WA7832	58.0	60.7	59.1	57.8	59.0	57.7	60.7	60.6	60.7	55.2	57.9	61.7	61.4	61.1	60.0	60.0	59.2	59.5
WA7853	60.5	62.7	61.9	59.9	58.8	58.4	62.3	63.0	62.7	57.6	58.8	63.3	60.4	61.4	61.4	60.6	59.9	60.8
WA7870	61.2	61.9	61.3	58.0	59.6	58.2	62.0	62.0	62.2	57.0	58.1	62.6	60.4	60.8	59.6	59.0	59.6	60.2
WEATHERFORD	58.0	60.5	59.0	57.1	58.6	57.5	60.7	60.8	61.0	55.0	55.8	62.1	59.4	60.6	60.2	59.6	58.8	59.1
WESTBRED 470	62.8	63.6	63.1	60.2	60.8	61.1	63.3	63.4	64.1	59.1	61.5	64.4	63.3	63.8	62.2	61.8	60.6	62.2
Soft White Club																		
CODA	60.6	62.7	61.3	58.4	61.2	59.4	62.8	61.6	62.8	58.1	59.7	63.1	61.3	61.4	61.7	60.3	59.7	60.9
HILLER	58.3	59.9	56.4	58.0	58.8	57.9	59.9	61.2	60.6	54.8	56.2	58.7	58.9	59.8	60.0	58.2	57.1	58.5
RELY	59.6	62.0	59.2	57.6	60.0	58.4	61.0	61.7	62.1	56.8	58.1	61.0	60.2	61.2	61.1	60.0	58.4	59.9
ROHDE	61.7	62.1	61.2	58.8	59.7	59.7	61.7	63.4	63.4	58.4	59.3	62.3	61.4	62.3	61.7	60.3	58.9	61.0
TEMPLE	59.3	61.2	59.7	58.2	60.0	59.8	60.7	61.8	62.1	56.1	59.1	61.8	61.7	62.3	61.6	60.5	58.8	60.2
Hard Red Common																		
ESTICA	55.8	58.3	57.6	53.5	54.1	54.3	59.5	58.2	59.0	50.4	52.7	59.8	57.8	59.2	57.3	57.0	54.5	56.3
NURSERY MEAN	59.4	61.0	59.8	57.8	58.9	58.0	61.0	61.2	61.5	55.7	57.2	61.7	60.0	61.0	60.3	59.3	58.4	59.5
LSD @ .10	0.9	1.1	0.9	0.6	0.5	0.5	1.2	0.7	0.4	1.3	1.0	0.7	0.9	1.0	0.6	0.6	0.6	0.2
CV %	1.2	1.3	1.3	0.8	0.8	0.8	1.5	1.0	0.6	2.0	1.5	0.9	1.3	1.1	0.8	0.8	0.8	1.1

6100146

1999 WSU WINTER WHEAT VARIETY TRIAL SUMMARY

September 24, 1999

YIELD (BU/A)

VARIETY NAME	RITZVILLE	COULER CITY	BICKLETON	ASOTIN	FAIRFIELD	MAYVIEW	POMEROY	LIND DRY	DUSTY	FARMINGTON	REARDAN	CRESTON	ST. JOHN	WALLA WALLA	LAMONT	DAYTON	PULLMAN	VARIETY MEAN
Soft White Common																		
ALBION	59.5	53.0	58.4	58.8	59.5	65.5	72.8	84.2	86.7	75.3	100.6	110.2	128.4	109.5	114.8	120.3	138.1	88.1
BU6W93-477	27.0	39.3	53.2	76.4	77.9	56.8	69.6	66.9	77.2	71.1	67.9	103.2	107.5	135.7	121.8	130.7	136.9	83.4
BU6W93-481	20.8	28.4	35.5	62.1	56.8	45.4	65.2	66.6	65.5	50.8	26.5	76.4	81.2	106.5	101.9	129.9	133.2	67.8
CASHUP	50.3	58.0	45.0	73.2	74.7	77.1	74.0	74.8	81.9	89.6	112.6	95.0	141.8	111.1	115.0	143.6	147.3	92.6
ELTAN	62.5	70.7	65.6	76.7	79.7	88.4	79.1	84.5	84.0	97.8	120.3	117.9	130.1	111.4	108.5	120.3	126.4	95.7
ELTAN-MADSEN	53.8	63.0	59.1	74.8	78.1	77.2	70.7	74.2	85.5	90.8	99.2	108.4	133.3	112.9	124.6	129.8	121.3	92.3
HILL 81	38.7	52.8	44.3	64.9	78.1	68.9	76.7	59.0	74.8	86.2	78.0	100.0	127.1	104.6	125.2	116.3	137.4	84.0
ID 10085-5	21.2	41.6	40.5	57.6	55.7	59.0	53.1	56.9	64.4	50.0	54.0	96.1	104.7	92.0	106.0	107.5	119.2	69.4
ID10420A	40.0	49.9	52.8	66.7	75.3	77.7	49.8	67.3	74.1	76.6	77.9	103.3	119.3	133.8	144.6	117.0	128.1	85.2
LAMBERT	43.1	48.0	55.2	68.6	54.1	69.6	66.5	58.5	73.8	72.0	92.2	107.8	122.2	119.2	123.3	112.0	115.2	82.6
LEWJAIN	51.5	57.1	42.6	53.1	63.2	61.1	75.5	77.5	70.0	77.6	97.9	101.3	100.0	108.8	121.1	96.4	130.5	81.6
MACVICAR	30.3	37.5	35.1	66.4	71.5	59.9	70.3	68.5	79.2	53.5	61.3	105.1	107.0	98.3	125.1	106.4	127.4	76.9
MADSEN	33.0	47.8	59.6	63.0	80.3	71.5	84.1	71.5	77.1	91.0	66.7	103.4	129.0	112.1	133.3	127.0	140.9	87.6
MADSEN .75X#/A	35.9	51.9	48.2	62.3	73.6	67.2	76.2	70.7	65.8	80.9	70.5	103.1	107.1	138.1	112.4	128.4	116.6	81.7
MADSEN 1.5X#/A	44.0	46.8	57.8	75.3	83.8	71.0	69.3	65.7	72.2	92.5	73.4	101.0	112.4	122.6	128.1	135.4	130.2	89.3
MADSEN-ROD	51.0	51.6	60.5	75.9	72.9	82.2	72.5	74.8	79.9	82.3	90.7	107.5	112.4	120.3	111.1	130.8	111.8	88.7
MADSEN-STEPHENS	34.9	39.3	50.7	70.7	77.0	53.4	68.4	68.1	76.7	77.5	62.3	93.4	109.9	111.9	127.4	140.5	137.6	87.7
MJ-4	45.2	45.9	47.5	77.0	69.1	78.6	69.8	87.6	66.9	84.0	77.7	100.4	125.9	111.9	120.5	140.5	137.6	87.7
OR939528	28.8	35.7	43.6	63.6	65.1	53.0	78.5	62.8	70.6	65.5	53.1	100.5	85.7	113.1	108.4	118.5	124.2	74.7
Q. HYBRID 7817	44.6	52.2	54.9	71.6	74.7	62.9	56.0	50.8	76.9	53.6	88.8	97.6	117.5	137.4	121.4	115.1	144.8	85.9
Q. HYBRID 95021	21.0	33.0	20.4	53.2	24.8	30.9	66.5	50.8	50.9	53.6	40.2	52.3	74.6	128.9	85.8	108.8	127.6	59.3
ROD	56.9	55.9	67.0	76.8	72.5	78.5	86.2	89.0	85.4	78.8	106.0	139.2	139.2	125.2	137.1	127.2	152.7	96.8
STEPHENS	27.8	39.2	43.9	57.1	58.1	55.6	75.4	65.5	67.3	51.3	48.7	91.4	109.4	105.5	113.8	110.8	115.0	72.2
WA7813	41.3	49.8	49.9	66.5	71.9	88.1	77.1	75.1	67.6	80.9	84.1	93.7	121.4	120.5	128.1	97.4	129.1	84.8
WA7832	38.2	45.6	55.7	66.5	72.2	77.6	67.5	65.4	72.3	81.3	86.6	85.2	123.9	129.5	117.8	126.7	125.8	84.5
WA7853	49.8	57.7	62.6	68.9	61.8	63.2	78.3	80.2	75.9	80.3	83.4	99.8	103.6	102.7	109.7	118.6	142.9	84.8
WA7870	56.8	55.4	58.7	70.6	79.2	66.4	59.7	79.9	77.0	75.1	97.8	105.8	116.2	127.0	123.3	114.1	140.4	88.4
WEATHERFORD	32.4	39.1	41.7	65.8	72.4	68.8	71.8	78.9	66.0	78.1	57.7	90.7	114.3	102.5	122.0	132.2	118.7	79.5
WESTBRED 470	53.1	38.7	60.4	67.5	44.3	65.4	66.9	68.6	79.7	71.1	89.1	90.1	120.3	136.1	101.5	121.7	134.9	83.0
Soft White Club																		
CODA	40.3	43.7	57.6	70.1	78.3	77.3	71.0	71.4	81.4	85.4	105.9	109.2	124.1	124.1	130.9	125.5	109.7	88.7
HILLER	50.2	51.9	56.9	72.6	72.2	78.0	74.2	75.7	73.8	82.9	99.8	114.0	140.4	108.2	137.0	124.5	134.7	91.3
RELY	47.8	50.4	63.6	65.6	79.6	75.0	58.9	72.5	77.1	84.6	105.1	103.2	114.6	119.7	112.1	104.9	110.4	85.0
ROHDE	47.7	39.3	56.6	58.5	49.1	58.3	61.1	66.3	68.4	78.7	98.2	96.2	120.2	125.3	119.3	109.4	100.1	79.5
TEMPLE	41.1	60.4	65.4	67.2	69.1	81.6	77.5	70.0	77.0	89.0	113.3	104.3	127.4	125.9	122.8	116.0	134.8	90.9
Hard Red Common																		
ESTICA	47.6	59.8	52.7	77.2	54.4	69.4	84.1	74.6	83.0	83.3	82.4	99.0	147.2	132.0	123.5	134.9	140.9	90.8
NURSTERY MEAN	42.0	48.3	52.1	67.5	68.0	68.0	70.7	71.4	74.5	77.0	82.0	99.3	117.8	118.7	119.5	120.6	129.1	83.9
LSD @ .10	6.0	8.3	11.6	8.8	10.0	10.5	14.7	7.4	7.4	14.3	9.5	10.2	16.9	26.9	16.8	13.2	25.7	3.3
CV %	12.1	12.6	19.0	11.1	12.5	13.2	16.3	8.8	8.5	15.8	9.9	8.8	12.2	15.7	12.0	9.3	16.9	13.5

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1998 WSU WINTER WHEAT VARIETY TRIAL SUMMARY

September 1, 1998

YIELD (BU/A)

VARIETY	BICKLETON	COULEE CITY	ST. JOHN	LIND DRY	RITZVILLE	DAYTON	LAMONT	WALLA WALLA	DUSTY	CRESTON	REARDAN	FAIRFIELD	ASOTIN	PULLMAN	MAYVIEW	FARMINGTON	MOSES LAKE	VARIETY MEAN
Soft White Common																		
123-T	28.7	45.1	40.4	63.3	62.4	56.8	80.1	76.7	73.4	94.7	97.6	106.7	101.8	74.2	82.5	117.4	141.4	79.0
ALBION (123-M)	38.6	48.5	69.8	79.0	79.9	80.0	91.0	88.6	115.3	108.8	108.4	112.3	104.4	120.1	112.7	130.2	120.9	94.6
BASIN	33.9	36.5	54.8	50.3	63.4	70.0	76.9	60.3	99.4	81.3	107.6	103.0	104.4	107.4	116.9	135.2	134.4	86.3
BRUNDAGE	33.5	51.3	62.2	40.3	73.3	83.8	99.5	60.3	114.5	121.1	102.6	74.1	107.3	109.3	114.4	121.6	153.2	89.5
CASHUP	27.7	39.2	71.2	55.3	65.9	84.4	83.7	101.4	110.0	100.0	118.6	100.5	105.3	100.8	115.3	138.7	138.7	91.6
DAWS	32.2	43.4	58.0	46.9	61.0	72.3	69.4	84.0	75.4	92.3	103.7	105.6	98.9	90.8	106.1	120.6	117.3	81.1
ELTAN	26.6	54.2	35.2	53.2	56.0	64.4	75.2	79.0	54.5	105.5	118.1	87.2	115.4	54.9	88.4	86.2	99.6	73.7
ELTAN-MADSEN 50-50	35.5	50.6	45.6	62.1	78.6	79.7	79.9	99.3	85.0	99.8	110.6	110.3	110.2	116.1	106.5	131.0	136.3	90.4
HILL 81	34.6	42.1	52.4	59.7	59.1	78.6	72.9	105.4	92.1	97.0	105.3	113.2	102.3	99.5	122.8	145.0	143.4	89.7
ID10420A	27.4	44.7	42.0	64.1	60.0	68.6	69.9	100.8	85.0	88.2	107.0	105.5	93.1	113.0	103.1	132.5	156.8	86.0
LAMBERT	41.9	52.2	55.3	70.0	68.8	82.4	93.7	93.5	96.3	112.2	107.3	106.0	101.9	101.2	112.7	121.4	139.7	91.6
LEWJAIN	35.1	46.9	28.5	58.8	60.6	60.7	77.1	74.7	72.3	95.1	108.8	82.2	104.9	55.2	89.4	93.2	105.3	73.5
MACVICAR	16.8	31.2	49.2	66.5	63.8	85.7	58.9	96.1	93.7	86.3	83.1	90.3	76.1	94.3	120.3	135.3	124.8	80.7
MADSEN	45.0	44.5	63.7	71.6	70.3	87.0	99.5	113.3	91.3	105.7	102.9	108.5	105.8	142.8	118.5	146.2	132.2	97.0
MADSEN-ROD 50-50	38.7	42.3	55.4	71.1	72.0	84.9	84.8	101.9	84.9	104.8	103.8	120.8	110.4	111.0	120.7	142.0	152.8	94.3
MADSEN-STEPHENS 50-50	39.6	46.5	61.8	68.1	74.6	83.7	78.7	99.5	97.5	100.5	84.6	112.6	101.0	129.1	117.7	146.5	131.6	92.6
NUGAINES	35.2	41.1	42.5	56.6	53.3	78.8	71.2	82.9	88.0	93.5	98.3	100.6	107.2	84.5	95.9	108.8	106.8	79.1
OR870082	26.8	25.2	77.3	68.3	74.3	90.5	91.3	58.5	118.5	93.0	95.0	82.3	103.9	123.5	115.5	133.5	147.2	89.7
Q.HYBRID 1019	32.4	48.3	55.9	59.4	70.5	88.1	84.7	85.7	104.1	106.5	96.9	95.5	102.1	117.0	123.8	138.3	154.7	92.0
ROD	35.0	44.7	44.4	61.1	65.3	72.9	82.7	84.0	81.3	101.7	111.4	107.2	103.6	92.0	116.7	144.9	148.3	85.1
ROD-WESTBRED 470 50-50	40.2	40.9	48.7	62.5	76.0	88.7	80.5	72.1	86.1	98.2	105.1	111.4	111.7	116.6	117.2	149.5	148.3	91.1
STEPHENS	35.9	44.8	48.0	67.1	70.8	89.3	86.0	86.2	103.3	97.0	78.0	103.0	97.9	95.5	126.2	132.6	124.6	87.4
WAY7853	44.7	52.4	42.6	61.2	73.2	76.9	78.0	99.8	90.3	106.4	108.2	96.0	112.4	105.3	115.3	125.4	143.8	90.1
WEATHERFORD (OR898120)	35.6	35.6	53.6	69.6	66.8	83.7	84.1	106.3	105.6	87.6	94.5	114.4	96.6	126.5	122.8	147.3	156.8	93.4
WESTBRED 470	43.4	39.9	58.3	58.7	71.2	91.6	95.1	50.2	92.0	111.2	92.1	97.5	101.5	111.1	120.1	136.5	150.4	89.5
WESTBRED 481	39.4	43.1	57.7	56.5	66.0	91.0	97.8	49.9	93.3	96.1	85.1	112.9	104.2	115.9	130.6	149.3	132.7	89.5
Soft White Club																		
CODA (WA7752)	36.4	44.6	43.0	60.9	68.0	69.8	92.7	82.5	80.4	93.0	108.3	113.2	102.7	82.9	103.2	97.1	112.8	81.9
HILLER	39.9	40.6	43.9	73.1	75.2	75.2	97.4	91.4	94.6	103.3	103.4	92.0	103.6	88.0	114.6	116.0	127.5	87.1
RELY	34.6	45.7	40.7	65.4	71.3	64.7	83.0	81.1	60.9	97.0	99.7	102.9	98.0	65.4	106.6	95.3	118.1	78.3
ROHDE	30.7	38.9	40.1	57.8	62.3	69.0	87.9	75.0	65.3	86.0	94.9	99.8	95.2	82.4	107.4	105.9	130.3	78.2
TEMPLE (OR920054)	37.5	36.5	58.1	68.8	74.8	82.9	89.7	71.1	66.2	91.4	103.6	105.5	96.1	85.1	112.3	102.1	150.4	80.8
TRES	31.4	40.2	38.0	56.1	67.4	50.4	84.1	74.9	53.8	93.9	99.2	96.2	93.0	67.2	92.1	88.1	98.7	72.0
Hard Red Common																		
ESTICA	42.5	47.7	57.7	75.8	89.1	79.0	89.9	116.4	120.4	108.2	107.9	106.8	118.4	121.4	117.8	158.0	170.7	101.6
NURSERY MEAN	35.1	43.3	52.9	62.4	68.6	78.4	84.8	86.1	90.0	98.7	101.2	101.6	102.6	103.0	111.9	126.9	136.5	88.6
CV %	14.1	14.2	27.3	13.0	11.8	8.6	12.8	10.3	14.4	9.5	8.3	12.4	7.6	13.0	5.6	7.9	9.9	26.4
LSD @ .10	6.1	7.2	17.0	9.6	9.5	8.1	12.7	12.1	15.1	11.0	9.8	14.8	9.1	15.8	7.3	11.8	15.8	8.0

Analysis Method - General Linear Models Procedure

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1999 WSU WINTER WHEAT VARIETY TRIAL SUMMARY

September 24, 1999

PROTEIN (%)

VARIETY NAME	RITZVILLE	COULEE CITY	BICKLETON	ASOTIN	FAIRFIELD	MAYVIEW	POMEROY	LIND DRY	DUSTY	FARMINGTON	REARDAN	CRESTON	ST. JOHN	WALLA WALLA	LAMONT	DAYTON	PULLMAN	VARIETY MEAN
<i>Soft White Common</i>																		
ALBION	11.4	10.4	9.4	11.2	11.4	10.6	12.2	12.2	11.0	11.4	9.9	8.2	10.2	12.6	11.1	9.5	8.4	10.6
BU6W93-477	12.8	10.6	8.2	9.8	10.9	10.2	12.9	12.9	10.9	11.7	11.6	7.9	10.7	11.6	11.5	9.3	8.4	10.6
BU6W93-481	12.6	11.3	9.4	10.4	11.0	10.4	12.4	12.4	11.2	12.7	12.8	8.6	11.7	11.9	11.5	9.8	8.6	10.9
CASHUP	12.7	10.6	9.7	10.1	10.7	10.4	12.3	12.3	11.8	11.1	10.3	8.7	11.4	12.1	11.5	9.7	8.6	10.8
ELTAN	11.7	10.0	8.5	9.8	10.5	10.1	9.7	11.5	10.9	11.2	10.6	8.1	10.2	13.0	12.0	9.6	8.2	10.3
ELTAN-MADSEN	12.7	10.0	8.0	10.4	10.4	10.5	11.3	12.4	10.9	10.9	8.8	7.9	11.4	12.6	11.3	9.6	8.4	10.5
HILL 81	12.9	10.4	9.2	10.6	10.7	10.9	12.8	12.8	11.5	12.0	10.9	8.6	11.2	13.0	11.1	9.9	8.5	10.9
ID 10085-5	13.8	11.9	10.0	10.4	11.5	10.5	11.7	13.5	12.4	12.6	11.5	8.6	11.2	13.0	11.7	10.8	8.9	11.4
ID10420A	13.9	11.9	8.6	10.5	10.7	10.6	12.9	12.9	11.6	11.6	10.9	8.7	10.7	12.9	11.3	9.8	8.6	11.0
LAMBERT	12.3	10.8	8.9	9.9	11.0	9.9	10.6	12.7	11.5	12.1	10.5	7.8	9.8	12.1	10.7	9.8	8.7	10.5
LEWJAIN	12.3	11.1	10.2	10.7	11.4	10.5	11.5	12.3	11.7	12.5	10.7	8.4	9.5	12.6	11.8	10.9	8.4	11.0
MACVICAR	12.8	11.1	9.1	10.6	10.8	10.2	12.8	12.8	11.1	12.7	11.4	8.5	9.9	11.4	11.1	9.9	8.1	10.7
MADSEN	13.7	12.0	9.0	10.1	10.8	10.8	12.8	12.8	11.2	12.0	12.2	8.8	11.5	11.8	11.5	10.5	8.6	11.0
MADSEN .75X#A	13.7	10.8	10.2	10.4	10.8	10.8	13.2	13.2	11.8	12.2	12.0	8.6	11.7	12.0	11.9	9.9	8.6	11.1
MADSEN 1.5X#A	12.3	10.8	8.3	10.1	10.6	10.8	13.3	13.3	11.5	11.8	11.2	8.1	10.5	11.4	11.4	10.4	8.7	10.7
MADSEN-ROD	12.1	11.0	8.9	10.1	10.6	10.4	12.6	12.6	11.1	11.5	10.8	8.2	10.9	12.1	11.4	9.8	8.0	10.6
MADSEN-STEPHENS	12.6	11.3	9.5	10.8	11.2	10.7	13.1	13.1	11.3	12.2	11.2	8.2	11.1	12.7	11.4	10.0	8.3	10.9
MJ-4	13.0	11.3	9.0	10.3	10.9	10.5	11.6	11.9	11.3	11.2	11.2	7.4	10.0	11.8	11.4	10.0	8.7	10.7
OR939528	13.2	11.4	9.2	10.8	10.9	10.5	12.8	12.8	11.8	12.3	11.8	8.5	10.6	12.1	11.5	10.1	8.5	11.0
Q. HYBRID 7817	11.5	10.2	7.9	10.4	10.7	10.4	11.4	11.4	11.2	11.8	10.6	7.3	9.6	11.4	10.9	9.8	9.0	10.3
Q. HYBRID 95021	12.9	11.6	10.0	11.4	11.6	10.4	12.1	12.1	11.5	11.9	12.8	9.7	11.8	11.8	11.6	9.6	8.5	11.2
ROD	12.0	9.9	7.9	9.4	10.8	10.4	10.9	11.7	10.8	11.4	10.1	7.7	10.2	11.5	11.0	9.4	8.2	10.2
STEPHENS	12.9	9.8	9.2	10.3	10.9	10.4	11.5	12.7	12.0	12.4	12.5	8.2	11.4	13.0	11.4	9.9	8.7	11.0
WA7813	13.2	12.1	8.5	10.0	11.4	10.7	13.0	13.0	11.8	11.9	11.0	8.6	11.8	12.6	11.4	10.2	8.5	11.0
WA7832	13.0	11.5	9.5	10.8	11.4	10.9	13.8	13.8	12.4	12.4	11.3	7.6	10.6	13.0	11.3	10.7	9.5	11.2
WA7853	12.4	10.6	8.6	10.3	11.2	10.7	11.5	11.5	11.0	11.6	10.5	8.0	10.8	12.5	11.2	9.6	8.4	10.6
WA7870	11.8	11.0	8.6	9.3	10.8	10.5	11.9	11.9	11.2	11.8	10.7	7.4	10.4	11.6	10.6	9.8	8.1	10.4
WEATHERFORD	13.6	11.4	8.9	11.3	11.3	10.9	12.6	12.6	11.9	12.1	12.2	8.2	11.9	13.0	12.0	10.3	8.9	11.2
WESTBRED 470	12.5	12.9	9.9	11.7	12.4	11.3	14.7	14.7	11.9	12.7	11.1	9.3	11.8	12.8	13.0	10.5	9.1	11.7
<i>Soft White Club</i>																		
CODA	12.9	10.5	9.1	10.5	10.6	10.1	13.3	13.3	11.2	11.6	11.1	8.2	10.8	12.1	11.9	9.5	8.9	10.8
HILLER	11.2	10.3	8.1	9.2	10.1	9.4	11.7	11.7	11.3	11.4	9.8	7.0	10.5	11.9	10.2	9.4	8.2	10.0
RELY	11.5	10.6	8.6	9.3	11.0	9.7	11.9	11.9	10.9	11.6	10.1	7.7	10.3	11.9	10.8	9.3	8.2	10.2
ROHDE	12.4	11.7	9.3	10.9	11.2	10.3	13.1	13.1	12.1	11.7	11.2	7.8	11.4	12.8	11.2	10.2	9.0	11.0
TEMPLE	12.3	10.5	8.1	9.4	11.3	9.6	12.9	12.9	11.3	11.7	9.8	8.4	10.8	12.1	10.8	9.8	8.5	10.5
<i>Hard Red Common</i>																		
ESTICA	12.2	10.1	9.0	10.5	12.0	11.1	11.9	11.9	10.7	12.3	11.7	8.1	10.2	11.9	11.3	10.2	9.3	10.7
NURSERIA MEAN	12.6	11.0	9.0	10.3	11.0	10.5	12.6	12.6	11.4	11.9	11.1	8.2	10.8	12.3	11.4	9.9	8.6	10.8
LSD @ .10	0.8	1.2	1.2	0.6	0.5	0.3	0.6	0.6	0.5	0.6	0.8	0.7	1.1	0.9	0.5	0.7	0.6	0.2
CV %	5.3	8.0	11.0	5.2	3.6	2.1	3.8	3.8	4.0	4.0	6.2	7.2	8.5	5.3	3.4	5.9	5.7	5.9

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1999 WSU HARD RED WINTER WHEAT VARIETY TRIAL SUMMARY

October 29, 1999

VARIETY NAME	YIELD (BU/A)						VARIETY MEAN
	HORSE HEAVEN	CONNELL	BICKLETON	COULTEE CITY	DUSTY	PULLMAN LATE	
Hard Red Common							
BLIZZARD	16.0	34.8	50.2	56.7	74.8	83.1	54.2
BOUNDARY	16.6	21.2	60.2	63.2	82.5	92.4	57.7
BUCHANAN	21.2	27.8	54.2	54.6	70.8	80.6	52.8
ESTICA	16.5	22.8	48.0	47.3	89.0	106.1	56.6
FINLEY	23.4	37.1	49.3	54.0	69.5	77.3	53.0
HARD 13	20.9	31.5	51.4	63.2	75.0	87.3	56.4
HARD 5	19.0	19.9	38.9	39.9	66.2	84.8	45.9
HATTON	22.2	34.0	55.0	54.1	83.5	74.5	55.3
N9500603	18.4	27.3	52.8	65.1	92.9	110.5	63.0
N9502901	17.2	20.3	48.1	47.5	71.2	74.6	47.8
N9504001	18.3	23.1	55.7	42.4	67.2	85.9	50.1
N9504301	16.8	27.5	60.9	52.6	84.9	84.4	56.1
N9504306	18.5	24.4	63.1	57.6	80.5	89.5	57.2
N9602702	20.5	33.4	50.4	60.6	67.0	92.7	55.6
Q. HYB. 542	20.0	34.2	54.6	61.9	86.7	98.1	61.0
Q. HYB. 7424	17.2	20.0	49.2	50.3	72.5	112.6	55.2
Q. HYB. 7510	16.2	20.2	48.2	50.8	78.9	106.6	55.1
SYMPHONY	12.5	27.0	49.8	57.2	91.5	101.7	58.5
TX91D-6913	10.5	16.8	38.3	52.4	74.9	94.0	49.4
WA7868	18.4	29.8	52.4	59.3	81.7	90.5	57.0
WA7869	23.2	27.0	51.8	55.1	63.2	83.5	51.8
WANSER	17.7	26.6	49.5	49.2	65.7	77.1	48.9
WESTON	16.3	24.6	49.6	52.5	68.9	70.9	48.5
WPB 703	10.1	15.6	36.6	25.4	62.7	56.9	35.6
Soft White Common							
ELTAN	20.3	30.4	47.9	66.8	95.8	99.6	61.9
NURSERY MEAN	17.9	26.3	50.6	53.6	76.7	88.6	53.8
LSD @ .10	6.1	5.1	12.5	6.7	12.6	6.9	3.7
CV %	24.7	16.0	20.9	10.6	13.9	6.6	14.1

1998 WSU WINTER WHEAT VARIETY TRIAL SUMMARY

September 1, 1998

TEST WEIGHT (LBS/BU)

VARIETY	BICKLETON	COULEE CITY	ST. JOHN	LIND DRY	RITZVILLE	DAYTON	LAMONT	WALLA WALLA	DUSTY	CRESTON	REARDAN	FAIRFIELD	ASOTIN	PULLMAN	MAYVIEW	FARMINGTON	MOSES LAKE	VARIETY MEAN
Soft White Common																		
123-T	55.6	61.7	54.3	60.6	60.4	59.6	60.1	60.3	60.7	61.4	59.0	60.9	59.0	56.6	61.1	59.6	61.1	59.6
ALBION (123-M)	56.0	60.9	54.2	60.3	59.8	59.4	59.7	57.3	60.2	60.9	58.6	60.0	59.1	57.5	59.5	59.1	56.0	58.8
BASIN	56.7	61.9	52.6	61.8	59.9	60.7	61.1	60.3	61.5	61.9	59.8	61.3	60.0	58.0	61.2	59.5	60.9	60.0
BRUNDAGE	56.4	62.0	54.5	63.1	60.5	61.5	61.2	55.1	62.2	62.8	60.3	61.7	60.1	59.0	62.1	59.7	61.1	60.2
CASHUP	56.9	61.5	56.8	61.6	60.2	60.7	60.8	60.5	61.9	62.3	60.6	61.2	59.9	58.9	61.3	60.7	61.1	60.4
DAWS	58.0	62.2	55.2	62.5	60.9	61.1	59.8	59.2	60.8	61.7	60.2	61.3	59.7	56.0	61.0	60.1	59.6	60.0
ELTAN	55.2	60.6	53.3	61.6	59.8	59.8	59.5	58.1	59.2	61.1	58.9	57.4	57.5	51.4	58.1	52.7	57.5	57.8
ELTAN-MADSEN 50-50	55.1	61.0	53.1	61.6	60.3	60.5	59.2	59.8	60.4	60.9	59.1	59.9	58.3	58.5	60.6	58.6	60.3	59.3
HILL 81	56.0	60.8	54.4	62.3	60.3	60.6	58.5	60.6	60.8	61.6	59.4	61.0	58.6	59.1	61.6	60.9	61.6	59.9
ID10420A	56.4	61.6	52.1	61.4	60.3	60.4	58.9	60.1	60.3	61.1	59.3	60.6	58.2	58.7	61.1	59.8	60.6	59.5
LAMBERT	55.4	60.2	53.3	60.8	58.8	59.1	58.2	57.3	59.8	60.7	58.4	60.8	58.6	58.1	60.3	59.5	60.4	58.8
LEWJAIN	57.0	61.9	54.1	63.1	61.8	61.2	61.2	57.3	60.3	61.6	59.5	57.2	58.7	52.7	57.3	54.3	58.7	58.7
MACVICAR	53.6	60.4	51.7	64.6	59.9	60.8	58.0	57.0	60.7	60.4	57.0	58.1	55.5	52.4	59.0	57.7	57.9	57.9
MADSEN	56.4	60.4	56.3	61.2	60.1	60.5	59.9	60.0	60.7	61.1	59.2	60.0	58.5	59.8	61.3	60.5	60.5	59.8
MADSEN-ROD 50-50	56.1	60.1	53.4	60.8	59.4	59.9	59.3	59.2	60.4	60.7	58.5	60.2	58.6	58.5	60.5	59.1	59.7	59.1
MADSEN-STEPHENS 50-50	55.4	60.1	54.0	60.6	59.6	59.5	58.4	56.3	60.3	60.5	57.9	60.6	58.7	59.5	61.0	60.4	60.4	59.0
NUGAINES	57.5	62.3	52.0	62.7	61.0	61.4	61.1	60.3	62.5	63.4	60.3	61.2	59.5	57.8	60.8	58.0	59.9	60.1
OR870082	54.4	58.9	55.7	62.8	60.8	60.5	60.2	58.1	61.8	62.4	58.9	61.7	60.3	61.0	62.3	61.1	62.0	60.2
Q.HYBRID 1019	56.3	61.0	55.9	62.9	60.9	62.1	60.4	60.2	61.7	62.8	58.4	62.3	60.8	62.2	62.1	61.8	62.5	60.9
ROD	55.4	60.3	52.3	61.2	59.1	59.9	58.4	56.4	58.7	60.6	57.9	58.2	57.3	55.2	59.4	57.9	58.7	58.1
ROD-WESTBRED 470 50-50	57.7	62.1	52.6	63.1	61.3	61.9	60.6	57.2	61.8	62.2	58.8	61.4	60.8	59.4	61.9	60.8	61.7	60.3
STEPHENS	54.5	59.9	52.9	60.5	58.5	59.1	57.6	54.6	60.2	60.3	55.9	60.1	58.0	58.3	60.9	59.8	58.3	58.2
WA7853	58.2	61.6	55.3	62.7	61.6	61.9	61.4	60.5	61.6	62.6	60.0	59.6	59.8	56.9	60.4	58.7	60.9	60.2
WEATHERFORD (OR898120)	55.9	60.1	53.1	61.5	60.2	60.7	59.4	59.4	60.6	61.3	58.0	60.9	58.3	59.8	61.6	60.9	61.6	59.6
WESTBRED 470	59.2	63.0	55.3	63.4	62.2	63.0	62.1	57.7	62.9	63.5	59.6	63.2	62.1	62.5	62.9	61.9	63.5	61.7
WESTBRED 481	58.1	62.9	55.3	64.2	62.1	60.8	62.2	56.9	61.4	60.3	58.0	61.2	59.7	59.9	61.8	61.2	59.8	60.3
Soft White Club																		
CODA (WA7752)	58.3	61.5	58.1	61.7	61.0	61.4	61.5	59.2	61.3	61.8	61.3	62.5	60.1	57.5	62.5	59.4	58.6	60.4
HILLER	55.5	57.9	53.7	58.5	57.3	58.2	56.6	55.7	59.0	59.0	57.5	57.4	56.7	54.2	58.7	57.5	56.6	57.1
RELY	56.9	60.3	54.6	60.8	59.7	60.6	59.4	58.2	60.4	61.1	58.8	60.9	58.4	53.3	61.0	56.9	58.2	58.8
ROHDE	57.4	62.1	54.7	61.9	60.5	60.8	60.4	59.1	60.3	61.8	59.2	61.9	60.2	58.5	62.7	60.4	59.0	60.1
TEMPLE (OR920054)	57.4	60.5	56.4	61.3	59.7	60.2	59.0	58.6	59.8	61.8	59.6	61.9	59.4	56.8	61.8	59.2	57.1	59.4
TRES	57.3	61.1	54.6	60.9	60.2	61.6	59.7	57.7	60.4	61.5	59.2	60.7	59.8	55.8	60.8	58.5	56.6	59.2
Hard Red Common																		
ESTICA	53.6	58.9	52.4	58.2	57.9	57.9	57.5	57.8	60.4	59.0	55.7	57.0	55.2	55.3	58.6	57.4	59.8	57.2
NURSERY MEAN	56.4	60.9	54.4	61.7	60.2	60.7	59.8	58.4	60.0	61.5	58.9	60.5	59.1	57.9	60.9	59.4	59.8	59.5
CV %	1.0	1.0	3.7	1.5	0.8	0.6	1.0	1.7	1.2	0.8	1.0	1.5	1.4	1.9	0.8	1.4	2.0	3.1
LSD @ .10	0.6	0.7	2.4	1.1	0.6	0.4	0.7	1.2	0.8	0.6	0.7	1.1	1.0	1.3	0.6	1.0	1.4	0.6

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1998 WSU WINTER WHEAT VARIETY TRIAL SUMMARY

September 1, 1998

PROTEIN (%)

VARIETY	BICKLETON	COULEE CITY	ST. JOHN	LIND DRY	RITZVILLE	DAYTON	LAMONT	WALLA WALLA	DUSTY	CRESTON	REARDAN	FAIRFIELD	ASOTIN	PULLMAN	MAYVIEW	FARMINGTON	MOSES LAKE	VARIETY MEAN
<u>Soft White Common</u>																		
123-T	7.9	8.1	13.4	9.8	9.1	8.6	7.8	11.8	11.6	10.2	9.9	11.1	8.0	10.3	10.0	9.6	11.6	10.0
ALBION (123-M)	8.1	7.7	12.4	9.6	9.4	8.5	7.5	10.9	10.1	9.7	9.8	10.4	7.9	10.4	9.8	9.8	11.2	9.6
BASIN	8.6	8.1	12.6	9.9	9.6	7.9	7.9	10.0	10.4	10.5	9.8	10.4	7.6	10.4	9.9	9.7	10.9	9.7
BRUNDAGE	7.0	7.3	12.6	9.7	8.7	7.9	7.2	11.2	9.7	8.9	9.3	10.6	7.8	9.5	8.8	8.9	10.8	9.2
CASHUP	8.9	8.5	14.0	9.3	9.7	8.8	8.8	10.9	10.4	10.1	10.2	10.4	7.7	10.1	9.4	9.7	11.4	9.9
DAWS	8.4	8.7	12.7	10.1	9.7	8.2	8.5	11.0	10.8	10.1	9.4	10.2	7.7	9.8	9.9	9.2	11.3	9.7
ELTAN	7.4	7.5	13.4	9.7	8.6	8.0	7.7	10.9	10.9	9.9	8.6	10.2	6.4	10.5	9.0	9.4	11.1	9.4
ELTAN-MADSEN 50-50	7.4	8.0	13.9	9.7	9.7	8.8	7.7	11.6	11.0	9.8	9.3	10.0	7.5	10.4	9.9	9.9	11.4	9.8
HILL 81	8.6	7.9	13.9	10.3	9.2	8.6	8.0	11.1	10.8	10.2	9.7	10.2	7.6	9.8	9.9	9.0	11.3	9.8
ID10420A	8.3	8.3	14.1	9.9	9.4	8.1	8.4	10.8	11.5	10.2	9.9	9.8	7.5	8.7	9.0	8.5	10.9	9.6
LAMBERT	7.5	8.1	13.3	9.0	8.4	7.8	7.3	10.9	9.9	9.3	8.9	10.0	8.0	9.4	9.2	9.0	11.1	9.2
LEWJAIN	7.5	7.7	13.7	9.8	9.1	8.5	8.3	11.8	10.8	9.9	8.8	9.9	7.2	10.4	9.7	9.2	11.4	9.6
MACVICAR	9.0	8.5	12.7	8.7	8.6	7.8	8.6	10.7	10.2	9.9	10.3	10.3	7.7	9.6	8.7	8.6	10.6	9.5
MADSEN	8.5	8.6	14.1	9.9	8.9	8.8	8.0	11.8	11.0	10.0	10.1	10.3	7.7	10.7	10.7	10.1	11.7	10.1
MADSEN-ROD 50-50	8.0	7.9	13.5	9.3	8.6	8.2	8.1	11.6	11.2	9.7	9.3	10.4	7.5	10.3	9.9	9.6	11.3	9.7
MADSEN-STEPHENS 50-50	8.1	8.3	13.3	9.3	9.2	7.9	7.7	12.0	11.1	9.9	9.9	10.3	8.2	10.3	9.8	10.2	11.5	9.8
NUGAINES	7.6	7.2	12.3	9.1	8.4	7.7	7.6	10.6	9.8	8.9	8.0	9.4	6.7	9.9	8.5	8.6	11.1	8.9
OR870082	8.7	11.1	13.0	10.2	9.5	8.0	8.2	11.2	10.2	10.2	10.0	11.4	8.2	10.7	10.5	10.1	11.0	10.1
Q-HYBRID 1019	8.0	8.0	13.4	10.0	10.1	7.9	7.9	11.3	11.3	9.5	10.9	11.2	7.8	10.3	9.9	10.3	11.8	10.0
ROD	8.0	7.7	13.0	9.5	8.2	8.3	7.9	11.0	10.5	9.4	9.1	9.7	7.2	9.8	9.3	9.1	11.0	9.4
ROD-WESTBRED 470 50-50	7.4	8.1	13.6	10.7	9.7	8.0	8.2	11.7	10.9	10.0	10.1	10.9	7.9	10.3	10.0	9.9	11.4	9.9
STEPHENS	7.7	8.2	13.1	9.2	8.7	8.3	8.2	11.9	11.0	10.3	10.1	10.8	8.3	9.8	9.7	9.6	11.4	9.8
WA7853	7.4	7.6	13.6	9.4	8.5	7.9	8.1	11.1	10.8	9.1	8.6	9.9	6.8	9.6	9.3	9.0	11.2	9.3
WEATHERFORD (OR898120)	8.4	9.1	14.3	9.7	10.3	8.2	7.9	12.3	11.2	10.6	10.7	10.5	7.9	10.2	9.9	9.9	11.3	10.1
WESTBRED 470	7.0	8.1	13.6	10.3	9.9	8.5	7.5	11.8	10.9	9.7	9.8	11.8	8.1	10.6	10.2	10.7	11.7	10.0
WESTBRED 481	7.7	8.5	13.3	10.6	9.5	7.9	7.9	12.0	10.6	9.9	10.0	10.5	8.0	10.7	10.3	10.1	11.8	10.0
<u>Soft White Club</u>																		
CODA (WA7752)	8.0	8.8	14.2	9.3	7.9	8.6	8.2	12.3	11.1	10.3	9.6	10.2	8.0	10.8	10.2	10.1	12.6	10.0
HILLER	8.7	8.3	13.5	9.1	8.0	7.8	8.1	11.1	10.5	9.2	9.4	10.3	7.5	10.3	9.4	9.4	10.9	9.5
RELY	7.7	8.1	13.7	8.7	8.5	7.8	8.1	11.0	12.1	9.4	9.0	10.2	7.6	10.3	9.2	9.7	11.6	9.6
ROHDE	8.1	9.1	14.3	8.5	9.0	8.3	7.8	11.9	11.7	10.2	10.1	10.7	8.3	10.7	10.2	10.0	11.4	10.0
TEMPLE (OR920054)	7.9	8.2	12.9	9.1	7.8	7.8	7.3	11.0	10.5	10.2	8.8	9.8	8.2	10.0	9.2	9.5	11.7	9.4
TRES	7.6	8.5	13.6	8.6	8.0	9.0	8.1	11.1	12.1	9.4	9.2	9.4	7.8	9.9	8.9	9.2	11.8	9.6
<u>Hard Red Common</u>																		
ESTICA	7.3	7.8	13.0	10.0	9.1	8.4	7.0	11.7	11.2	9.2	10.0	10.5	7.7	10.1	8.9	9.7	11.6	9.6
NURSERY MEAN	8.0	8.2	13.4	9.6	9.0	8.2	8.0	11.3	10.9	9.9	9.7	10.5	7.8	10.2	9.7	9.7	11.5	9.8
CV %	7.6	5.1	4.9	6.7	15.0	8.5	7.3	5.4	6.0	5.7	7.7	5.0	5.2	5.5	4.5	3.9	3.3	13.2
LSD @ .10	0.7	0.5	0.8	0.8	1.6	0.8	0.7	0.7	0.8	0.7	0.9	0.6	0.6	0.7	0.5	0.4	0.5	0.4

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1997 WSU WINTER WHEAT VARIETY TRIAL SUMMARY
YIELD (BU/A)

VARIETY NAME	ASOTN	LIND DRY	RITZVILLE	PULLMAN	FARFIELD	CRESTON	DAYTON	READMAN	LAMONT	POMEROY	MAYVIEW	MOSES LAK	WALLAWAN	DUSTY	ST. JOHN	VARIETY A
Soft White Common																
123-M	61.7	72.0	82.4	97.2	111.6	100.9	109.4	115.3	114.5	118.8	125.3	126.8	129.3	130.6	145.0	109.3
BASIN	53.5	51.4	75.0	99.0	113.3	93.3	107.6	98.6	105.1	105.1	120.7	117.0	114.1	122.7	137.2	100.8
CASHUP	65.9	56.0	80.2	102.4	114.8	105.4	108.9	111.2	124.4	108.6	130.7	127.9	115.7	131.4	150.0	108.6
DAWS	40.1	61.4	69.0	90.1	104.5	102.3	103.4	112.4	80.8	118.8	109.8	117.6	114.6	125.6	133.4	99.6
ELTAN	56.6	64.1	74.6	85.0	94.7	73.2	107.5	120.1	113.5	123.4	126.2	117.0	130.2	110.3	123.9	101.7
HILL 01	57.1	56.7	72.8	95.6	102.2	101.6	95.0	103.6	104.5	111.2	111.7	119.4	139.6	126.3	135.9	102.2
HILLER	65.9	71.9	75.2	96.8	99.1	111.7	110.8	121.5	117.9	123.9	130.6	117.6	117.2	132.1	139.7	108.7
ID10420A	66.7	60.1	80.8	97.4	102.8	98.7	98.7	104.5	117.5	117.5	118.5	123.0	145.9	128.8	139.8	105.4
ID14502B-BRUNDAGE	53.9	57.6	65.6	89.6	98.7	118.4	117.9	106.4	117.0	116.4	113.2	108.3	111.4	135.0	163.5	104.7
LAMBERT	58.8	59.9	79.1	95.5	99.6	103.0	105.7	100.7	124.1	126.0	117.3	127.5	139.8	149.9	157.9	109.0
LEWJAN	49.4	59.3	74.4	70.9	97.5	108.4	89.3	121.4	123.7	111.7	115.7	106.0	119.8	121.9	134.7	99.9
MACVICAR	57.3	60.6	64.2	94.7	97.9	100.1	101.2	90.5	130.0	116.0	115.4	120.8	133.4	135.6	135.1	103.6
MADSEN	62.3	56.3	69.4	94.3	97.9	113.7	100.9	96.9	101.9	105.1	111.5	116.5	126.8	121.7	135.8	100.7
NUGAINES	45.4	49.9	50.5	93.6	100.9	93.6	98.2	84.4	95.3	97.8	114.1	121.2	98.7	123.6	110.8	95.1
OR870082	57.0	53.2	63.3	95.4	94.5	65.8	94.7	24.6	96.3	97.8	111.3	129.0	120.8	108.6	132.5	90.6
OR890120	63.9	53.7	61.0	92.6	99.0	83.0	83.0	91.3	98.2	97.5	101.8	108.0	112.7	109.2	127.0	91.8
QUANTUM HYBRID 1019	56.7	71.2	83.1	102.5	97.5	105.6	120.9	89.4	123.8	129.4	121.1	139.9	183.3	141.3	148.9	110.8
ROD	72.5	69.9	88.5	103.0	106.1	107.3	109.7	123.4	122.8	126.1	127.5	124.4	143.8	126.0	151.7	113.4
STEPHENS	63.7	69.1	67.6	102.4	86.7	106.3	110.5	103.3	121.1	110.5	116.3	123.8	130.3	124.5	146.4	105.4
WAT794	58.4	73.2	84.4	90.3	103.1	118.0	110.6	110.3	127.2	114.0	123.3	122.3	126.4	130.2	146.5	108.9
WESTBRED 470	55.6	64.3	70.3	102.6	91.9	102.3	127.7	74.3	124.3	127.3	126.5	130.0	126.7	141.1	149.4	107.3
WESTBRED 481	69.5	78.2	69.1	114.0	98.9	105.1	106.3	91.8	129.8	121.3	119.1	136.4	138.2	131.1	137.5	109.4
Soft White Club																
HYAK	46.8	60.0	63.8	86.3	103.4	119.5	99.2	105.1	110.8	111.2	100.9	97.8	104.5	124.3	128.0	97.2
OR920049	58.5	59.3	67.2	83.8	84.6	103.7	101.4	92.7	108.1	112.1	102.2	107.4	98.4	135.6	135.6	96.5
OR920064	63.4	73.6	65.8	90.4	101.0	108.0	102.5	102.4	114.2	119.8	113.8	102.3	112.4	129.5	152.2	103.2
RELY	54.8	69.0	75.8	86.2	96.8	101.9	108.7	103.7	112.5	117.5	126.5	120.4	128.0	119.3	133.1	103.5
ROHDE	55.0	61.3	73.8	86.0	110.3	98.8	107.3	107.0	118.0	122.2	111.7	119.8	131.3	123.5	142.6	104.3
TRES	46.6	64.3	63.6	73.2	108.0	100.5	92.6	116.8	118.4	116.5	107.9	112.1	124.3	130.7	140.2	100.8
WAT782	58.6	65.6	85.6	98.1	104.3	110.4	109.0	104.8	96.2	117.7	115.6	129.0	123.7	123.0	130.6	105.0
WAT793	68.2	63.7	79.1	84.6	105.3	103.9	114.2	74.1	107.6	105.8	107.7	115.9	123.2	137.8	150.0	102.7
Hard Red Common																
ESTICA	70.7	76.9	84.9	104.7	99.9	126.8	113.9	107.5	119.4	121.8	125.2	133.0	135.2	135.8	163.2	114.5
NURSERY MEAN	60.0	63.3	72.9	94.8	101.0	103.3	105.3	106.0	113.8	115.9	116.7	119.9	124.2	127.2	138.8	105.0
CV (%)	15.1	11.3	10.1	9.6	13.8	8.1	5.9	11.1	19.1	11.0	9.4	8.4	6.1	7.6	7.8	10.3
LSD @ .10	10.5	0.3	8.7	10.7	16.4	9.8	7.2	13.8	29.5	15.0	12.8	11.8	9.0	11.3	12.7	6.2

1997 WSU WINTER WHEAT VARIETY TRIAL SUMMARY

Analysis Method - General Linear Models Procedure

1997 WSU WINTER WHEAT VARIETY TRIAL SUMMARY
TEST WEIGHT (LBS/BU)

VARIETY NAME	ASOTTN	LINDRY	RITZLEH	PULLMAN L	TARFIELD	CRESTON	DAYTON	REARDAN	LAMONT	POMEROY	MAYMEW	MOSES LAK	WYALLAWAY	DUSTY	ST JOHN	VARIETY A1
Soft White Common																
122-M	60.4	61.7	60.6	59.6	59.8	60.0	60.2	57.7	59.4	61.1	60.9	58.1	59.1	59.7	59.9	59.9
BASHN	61.3	63.6	61.7	61.5	60.7	60.8	60.9	58.1	61.3	62.1	62.0	57.8	58.7	60.7	61.0	60.8
CASHUP	59.9	61.6	62.5	60.2	59.5	60.0	61.4	58.3	60.4	61.6	61.8	60.5	61.0	60.6	61.5	60.7
DAWS	59.8	62.8	63.0	59.8	59.3	59.8	60.7	60.0	61.4	62.5	62.0	58.5	60.3	61.2	61.2	60.8
ELTAN	59.1	62.9	62.2	56.5	59.1	56.5	60.0	57.3	59.7	58.4	60.5	56.8	59.9	59.7	58.4	59.1
HILL 01	59.2	62.5	62.4	59.4	59.3	58.8	61.2	58.0	60.7	61.5	60.9	58.2	60.8	61.0	61.3	60.4
HILLER	57.6	58.8	59.7	55.8	58.2	57.3	57.0	57.4	57.6	58.7	59.2	54.8	57.2	57.9	58.5	57.7
ID10420A	60.1	62.6	61.8	59.7	60.4	58.9	61.6	57.5	60.1	61.9	61.2	59.9	61.0	60.6	60.9	60.6
ID14602B-BRUNDAGE	62.0	63.4	63.0	61.5	61.3	61.6	61.7	57.9	61.1	62.3	62.4	57.7	61.1	61.4	62.9	61.4
LAMBERT	60.4	62.1	60.3	59.8	59.7	59.4	60.1	56.2	59.3	60.8	60.6	60.0	60.7	59.2	60.4	60.0
LEWJAIN	60.1	63.5	62.9	55.5	58.6	59.7	60.7	59.0	61.5	61.5	61.5	56.5	60.1	60.5	60.7	60.1
MACVICAR	59.6	62.7	61.6	58.4	60.5	59.8	60.8	58.0	60.5	62.5	60.7	55.6	60.5	60.8	60.2	60.2
MAOSEN	59.8	62.2	61.2	59.8	59.3	59.9	60.6	58.4	59.7	61.2	60.8	58.2	60.2	60.1	61.2	60.2
NUGAINES	62.9	63.1	63.2	61.2	62.0	60.6	61.7	58.1	61.5	63.3	62.3	57.9	60.7	61.3	60.5	61.4
OR070002	59.3	62.4	61.0	59.2	59.0	59.9	60.1	57.6	60.9	60.6	60.4	59.9	60.1	59.9	60.8	60.2
OR098120	59.2	61.7	61.1	59.5	59.4	59.9	59.7	57.2	59.5	61.4	60.2	57.8	59.2	59.9	60.6	59.8
QUANTUM HYBRID 1019	61.9	63.8	62.5	62.8	60.6	61.9	62.0	59.6	61.8	62.9	62.0	62.4	61.7	61.8	62.1	62.0
ROD	58.7	61.7	61.2	58.3	58.3	58.2	58.3	57.8	59.5	60.3	60.5	56.6	58.8	59.1	60.4	59.2
STEPHENS	59.8	60.5	59.7	59.3	57.9	59.5	59.3	57.4	59.5	60.9	60.4	58.2	59.8	58.5	60.0	59.4
WAT794	59.8	63.1	62.5	57.9	60.2	60.7	61.2	59.2	61.8	61.8	61.6	57.8	59.3	61.7	61.6	60.7
WESTBRED 470	62.7	64.7	63.5	63.0	61.2	62.9	63.3	60.6	62.9	64.3	63.0	60.6	62.3	62.9	62.8	62.7
WESTBRED 481	60.1	62.2	61.6	60.9	59.5	59.7	60.5	58.8	60.8	62.2	61.3	58.6	61.0	60.6	60.5	60.6
Soft White Club																
HYAK	57.4	61.7	61.2	57.1	59.3	58.8	60.2	58.8	58.8	61.4	60.3	52.7	59.4	58.8	59.0	59.0
OR920049	57.4	60.1	59.9	54.9	57.0	57.5	57.5	57.3	59.2	60.3	58.0	53.0	57.9	59.1	59.0	57.9
OR920054	60.3	62.2	62.2	59.2	60.0	59.9	59.9	59.1	60.0	60.0	61.8	57.4	60.5	60.3	61.5	60.3
RELY	59.6	60.9	62.0	58.2	59.3	58.3	58.7	58.4	59.5	60.6	60.4	57.5	60.3	58.7	59.2	59.5
ROHDE	61.2	63.5	62.9	59.7	61.1	59.8	61.4	59.5	60.8	63.0	61.7	58.0	61.0	60.4	61.5	61.2
TRES	59.8	61.6	62.3	56.9	60.8	59.7	60.9	59.7	60.9	61.5	61.4	58.0	60.7	60.2	61.1	60.4
WAT762	61.4	62.1	62.9	60.0	61.5	60.9	60.2	59.7	61.0	63.1	62.0	60.4	60.0	60.2	61.4	61.2
WAT793	57.5	58.4	60.2	56.9	58.7	57.6	57.5	56.9	58.3	58.9	58.4	55.4	58.1	58.0	59.7	58.1
Hard Red Common																
ESTICA	55.7	59.4	58.7	56.2	57.5	57.8	58.6	55.8	58.3	59.1	58.4	56.9	58.4	58.5	60.7	58.0
NURSERY MEAN	59.7	62.1	61.7	58.8	59.5	59.4	60.3	58.1	60.2	61.4	60.9	57.9	60.0	60.0	60.4	59.9
CV (%)	1.5	1.0	0.7	1.4	1.9	1.0	1.4	1.0	1.9	1.2	0.7	3.2	0.9	1.3	1.4	1.6
LSD @ .10	1.1	0.7	0.5	1.0	1.3	0.7	1.0	0.7	1.6	0.8	0.5	2.1	0.6	0.9	1.0	0.5

Analysis Method - General Linear Models Procedure

1997 WSU WINTER WHEAT VARIETY TRIAL SUMMARY

PROTEIN (%)

VARIETY NAME	ASOTIN	LIND DRY	RITZVILLE	PULLMAN 1	FARFIELD	CRESTON	DAYTON	REARDAN	LAMONT	POMEROY	MAYMEW	MOSES LAK	WALLAWAL	DUSTY	ST. JOHN	VARIETY A1
<u>Soft White Common</u>																
123-M	9.8	11.0	10.6	9.4	9.5	8.4	10.5	8.3	8.0	8.9	10.2	12.2	11.4	9.4	10.3	9.9
BASIN	9.7	10.3	10.4	9.0	9.7	8.1	10.6	9.1	9.4	8.5	9.7	12.0	10.0	9.1	10.1	9.8
CASHUP	8.8	9.3	10.5	8.9	9.9	7.8	10.7	8.9	8.5	9.0	9.8	12.2	11.7	9.1	10.5	9.7
DAWS	10.1	9.7	11.9	8.6	10.1	8.6	11.0	8.7	8.8	9.4	10.2	13.0	11.9	9.3	10.3	10.1
ELTAN	8.4	9.6	10.7	8.2	9.2	8.7	10.8	8.2	8.3	7.7	9.6	13.2	11.8	9.7	10.4	9.7
HILL 81	9.5	11.4	11.2	8.9	10.2	8.0	11.8	9.3	9.6	9.0	10.3	13.2	12.0	9.7	10.8	10.3
HILLER	8.3	9.5	10.2	8.8	10.1	7.8	10.5	8.3	8.3	8.3	9.5	12.3	11.2	9.1	10.2	9.5
ID10420A	9.3	11.8	11.8	8.7	10.2	8.4	11.2	8.6	9.0	9.1	10.2	12.9	11.7	9.5	11.0	10.2
ID14602B-BRUNDAGE	10.3	9.9	11.2	9.0	10.0	8.2	11.2	8.3	8.7	9.0	10.1	12.7	11.7	9.3	10.2	10.0
LAMBERT	10.0	10.7	10.3	8.7	9.8	8.1	10.8	8.2	8.5	9.0	10.1	12.5	11.7	8.7	10.8	9.9
LEWJAIN	10.1	9.8	11.5	8.6	9.9	7.8	11.7	8.6	9.9	9.1	10.3	12.9	11.9	9.8	11.3	10.2
MACVICAR	9.7	10.6	11.4	8.5	10.0	8.0	10.8	8.6	8.3	8.8	10.1	12.6	11.5	9.0	9.9	9.9
MADSEN	10.1	11.0	12.1	9.7	10.6	8.2	12.3	9.1	8.8	10.0	11.1	13.0	12.1	10.0	11.1	10.7
NUGAINES	10.5	9.9	10.9	8.0	9.5	7.6	11.4	8.5	7.4	9.3	9.9	11.9	11.7	8.8	10.1	9.8
OR870082	11.3	10.8	12.9	10.2	11.7	10.6	11.9	12.0	9.9	10.0	11.1	13.1	12.3	9.8	11.1	11.3
OR898120	10.1	11.5	12.5	9.8	10.7	8.7	12.2	10.1	10.5	9.9	11.0	13.3	11.9	9.8	10.9	10.9
QUANTUM HYBRID 1019	10.7	11.0	11.4	10.0	11.1	8.7	11.5	10.1	9.0	8.7	10.4	12.9	11.9	9.9	10.3	10.5
ROD	9.4	9.8	9.8	8.6	9.4	7.9	11.5	8.3	8.3	8.7	9.5	12.7	11.2	9.4	10.0	9.7
STEPHENS	10.1	10.0	11.2	9.1	10.3	8.6	11.0	9.0	9.2	8.7	10.1	12.8	11.7	9.7	10.1	10.1
WAT794	8.7	10.5	10.5	8.5	10.1	7.9	10.7	7.8	8.5	8.5	9.9	12.4	11.4	8.9	10.1	9.7
WESTBRED 470	10.3	11.8	11.6	10.8	10.7	9.0	11.5	10.7	9.3	9.4	10.7	14.1	13.1	9.3	10.9	10.9
WESTBRED 481	9.6	10.3	11.1	9.2	10.5	7.8	10.8	8.8	8.4	8.9	10.4	12.8	11.6	9.2	10.2	10.0
<u>Soft White Club</u>																
HYAK	10.4	10.3	11.3	9.5	10.7	7.5	11.1	8.6	8.5	9.3	10.4	13.3	12.7	9.8	11.2	10.4
OR920049	9.0	9.3	10.8	8.2	10.0	7.6	10.7	9.0	9.0	8.4	10.2	12.5	11.4	9.2	9.9	9.9
OR920064	10.1	10.7	10.6	8.8	10.0	8.0	10.5	8.0	8.5	9.0	10.2	12.7	11.7	9.5	10.0	9.9
RELY	9.2	9.3	10.7	8.5	10.4	7.8	10.6	8.6	7.9	8.3	10.2	13.1	12.1	8.8	9.8	9.7
ROHDE	9.3	10.9	10.5	9.0	10.7	8.7	11.1	9.4	8.9	9.3	10.9	13.0	11.8	10.1	10.7	10.3
TRES	9.6	9.4	11.3	8.7	10.3	8.3	10.9	8.7	8.9	8.4	10.9	13.1	12.2	9.2	10.6	10.1
WAT762	9.4	9.9	10.4	9.1	10.7	8.5	11.8	9.3	8.7	9.1	10.7	13.5	12.5	9.5	11.7	10.4
WAT793	9.4	8.2	11.0	9.1	10.0	8.3	11.3	9.6	8.4	8.7	10.1	13.7	12.6	9.9	11.2	10.1
<u>Hard Red Common</u>																
ESTICA	8.9	9.9	10.6	9.5	10.1	8.1	11.4	9.3	9.8	9.2	9.9	13.3	12.6	10.0	11.5	10.3
NURSERY MEAN	9.5	10.3	11.1	9.0	10.1	8.2	11.2	8.8	8.8	9.0	10.2	12.8	11.9	9.5	10.6	10.0
CV (%)	8.8	8.0	9.9	6.3	5.4	5.4	6.8	6.7	18.6	6.6	3.3	4.3	2.6	10.3	8.5	7.6
LSD @ .10	1.0	1.0	1.3	0.7	0.6	0.5	0.9	0.7	2.2	0.7	0.4	0.6	0.4	1.1	1.1	0.5

Analysis Method - General Linear Models Procedure

Lodging Nursery

----- LOCATION=WALLA WALLA -----

VARIETY NAME	YIELD BU/A	TEST WT	% PROTEIN	PLANT HT	LODGE %
MADSEN	113.3	60.0	11.8	46	20
WEATHERFORD (OR898120)	106.3	59.4	12.3	47	10
HILL 81	105.4	60.6	11.1	45	10
MADSEN-ROD 50-50	101.9	59.2	11.6	47	20
CASHUP	101.4	60.5	10.9	45	0
ID10420A	100.8	60.1	10.8	47	0
WA7853	99.8	60.5	11.1	45	20
MADSEN-STEPHENS 50-50	99.5	56.3	12.0	46	40
BASIN	99.4	60.3	10.0	43	0
ELTAN-MADSEN 50-50	99.3	59.8	11.6	46	30
MACVICAR	96.1	57.0	10.7	45	0
LAMBERT	93.5	57.3	10.9	46	40
ALBION (123-M)	88.6	57.3	10.9	44	0
STEPHENS	86.2	54.6	11.9	45	40
Q.HYBRID 1019	85.7	60.2	11.2	44	0
DAWS	84.0	59.2	11.0	43	0
ROD	84.0	56.4	11.0	48	40
NUGAINES	82.9	60.3	10.6	40	0
ELTAN	79.0	58.1	10.9	43	50
123-T	76.7	60.3	11.8	45	70
LEWJAIN	74.7	57.3	11.8	44	60
ROD-WESTBRED 470 50-50	72.1	57.2	11.7	45	0
BRUNDAGE	60.3	55.1	11.2	44	10
OR870082	58.5	58.1	11.2	46	0
WESTBRED 470	50.2	57.7	11.8	46	0
WESTBRED 481	49.9	56.9	12.0	46	0
HILLER	91.4	55.7	11.1	43	20
CODA (WA7752)	82.5	59.2	12.3	47	70
RELY	81.1	58.2	11.0	45	60
ROHDE	75.0	59.1	11.9	46	80
TRES	74.9	57.7	11.1	46	50
TEMPLE (OR920054)	71.1	58.6	11.0	44	80
ESTICA	116.4	57.8	11.7	46	0
NURSERY STATS					
MEAN	86.1	58.4	11.3		
CV %	10.3	1.7	5.4		
LSD @ .10	12.1	1.2	0.7		

PLANTED: 10/14/1997
HARVESTED: 7/23/1998
RECEIVED : 7/24/1998
PROCESSED: 7/27/1998

Lodging Nursery

----- LOCATION=ST. JOHN -----

VARIETY NAME	YIELD BU/A	TEST WT	% PROTEIN	PLANT HT	LODGE %
MADSEN 45#/A	78.7	56.5	13.7	42	65
OR870082	77.3	55.7	13.0	38	89
CASHUP	71.2	56.8	14.0	39	94
ALBION (123-M)	69.8	54.2	12.4	39	76
MADSEN 60#/A	64.7	55.7	14.0	41	86
WESTBRED 470 45#/A	64.3	56.9	13.3	37	91
MADSEN	63.7	56.3	14.1	42	89
BRUNDAGE	62.2	54.5	12.6	39	93
MADSEN-STEPHENS 50-50	61.8	54.4	13.3	39	91
WESTBRED 470	58.3	55.3	13.6	38	97
DAWS	58.0	55.2	12.7	38	78
WESTBRED 481	57.7	55.3	13.3	40	92
Q.HYBRID 1019	55.9	55.9	13.4	39	94
MADSEN-ROD 50-50	55.4	53.4	13.5	41	98
LAMBERT	55.3	53.3	13.3	42	99
WESTBRED 470 60#/A	54.8	55.3	13.5	38	96
BASIN	54.8	52.6	12.6	32	90
WEATHERFORD (OR898120)	53.6	53.1	14.3	41	86
HILL 81	52.4	54.4	13.9	42	95
MACVICAR	49.2	51.7	12.7	39	95
ROD-WESTBRED 470 50-50	48.7	52.6	13.6	39	98
STEPHENS	48.0	52.9	13.1	39	96
ELTAN-MADSEN 50-50	45.6	53.1	13.9	41	99
ROD	44.4	52.3	13.0	41	99
WA7853	42.6	55.3	13.6	42	96
NUGAINES	42.5	52.0	12.3	39	79
ID10420A	42.0	52.1	14.1	44	98
123-T	40.4	54.3	13.4	43	99
ELTAN	35.2	53.3	13.4	40	99
LEWJAIN	28.5	54.1	13.7	37	98
TEMPLE (OR920054)	58.1	56.4	12.9	39	98
HILLER	43.9	53.7	13.5	44	99
CODA (WA7752)	43.0	58.1	14.2	45	96
RELY	40.7	54.6	13.7	40	99
ROHDE	40.1	54.7	14.3	40	98
TRES	38.0	54.6	13.6	42	99
ESTICA	57.7	52.4	13.0	42	99
NURSERY STATS					
MEAN	52.9	54.4	13.4		
CV %	27.3	3.7	4.9		
LSD @ .10	17.0	2.4	0.8		

PLANTED: 9/22/1997

HARVESTED: 8/10/1998

RECEIVED : 8/10/1998

PROCESSED: 8/11/1998

Lodging Nursery

----- LOCATION=MOSES LAKE -----

VARIETY NAME	YIELD BU/A	TEST WT	% PROTEIN	PLANT HT	LODGE %
WESTBRED 470 45#/A	167.9	63.6	12.0	38	0
WESTBRED 470 60#/A	159.8	63.3	11.8	39	0
ID10420A	156.8	60.6	10.9	45	5
WEATHERFORD (OR898120)	156.8	61.6	11.3	44	0
Q.HYBRID 1019	154.7	62.5	11.8	40	21
MADSEN 60#/A	153.6	61.2	11.8	40	3
BRUNDAGE	153.2	61.1	10.8	39	4
MADSEN-ROD 50-50	152.8	59.7	11.3	39	25
WESTBRED 470	150.4	63.5	11.7	39	8
MADSEN 45#/A	150.4	60.7	11.7	42	0
ROD-WESTBRED 470 50-50	148.3	61.7	11.4	39	30
OR870082	147.2	62.0	11.0	40	20
WA7853	143.8	60.9	11.2	44	30
HILL 81	143.4	61.6	11.3	43	20
123-T	141.4	61.1	11.6	48	40
LAMBERT	139.7	60.4	11.1	41	48
CASHUP	138.7	61.1	11.4	37	34
ELTAN-MADSEN 50-50	136.3	60.3	11.4	40	30
BASIN	134.4	60.9	10.9	35	0
WESTBRED 481	132.7	59.8	11.8	38	90
MADSEN	132.2	60.5	11.7	40	45
MADSEN-STEPHENS 50-50	131.6	60.4	11.5	37	44
MACVICAR	124.8	57.9	10.6	39	15
STEPHENS	124.6	58.3	11.4	38	87
ALBION (123-M)	120.9	56.0	11.2	38	30
ROD	120.3	58.7	11.0	39	78
DAWS	117.3	59.6	11.3	40	13
NUGAINES	106.8	59.9	11.1	39	79
LEWJAIN	105.3	58.7	11.4	38	87
ELTAN	99.6	57.5	11.1	40	75
ROHDE	130.3	59.0	11.4	40	65
HILLER	127.5	56.6	10.9	43	60
RELY	118.1	58.2	11.6	40	80
CODA (WA7752)	112.8	58.6	12.6	44	75
TRES	98.7	56.6	11.8	41	85
TEMPLE (OR920054)	91.7	57.1	11.7	43	83
ESTICA	170.7	59.8	11.6	43	3
RIALTO	165.8	59.7	11.5	37	13
SHANGO	153.4	59.5	11.7	37	25
HEREWARD	146.6	59.9	12.3	32	0
HANSEAT	142.9	56.2	12.1	36	20
CHARGER	130.5	56.0	12.3	32	0
NURSERY STATS					
MEAN	136.5	59.8	11.5		
CV %	9.9	2.0	3.3		
LSD @ .10	15.8	1.4	0.5		

PLANTED: 10/1/1997
HARVESTED: 7/24/1998
RECEIVED : 7/30-8/10/1998
PROCESSED: 8/18/1998

9900146

Cephalosporium Stripe Nursery

----- LOCATION=REARDAN -----

VARIETY NAME	YIELD BU/A	TEST WT	% PROTEIN	PLANT HT	LODGE %	CEPH STRP %
CASHUP	118.6	60.6	10.2	38	0	0
ELTAN	118.1	58.9	8.6	43	0	0
ROD	111.4	57.9	9.1	39	0	1
ELTAN-MADSEN 50-50	110.6	59.1	9.3	41	0	0
LEWJAIN	108.8	59.5	8.8	37	0	1
ALBION (123-M)	108.4	58.6	9.8	38	0	0
WA7853	108.2	60.0	8.6	41	0	0
BASIN	107.6	59.8	9.8	32	0	0
LAMBERT	107.3	58.4	8.9	45	0	2
ID10420A	107.0	59.3	9.9	45	0	1
HILL 81	105.3	59.4	9.7	44	0	2
ROD-WESTBRED 470 50-50	105.1	58.8	10.1	39	0	4
MADSEN-ROD 50-50	103.8	58.5	9.3	40	0	3
DAWS	103.7	60.2	9.4	39	0	0
MADSEN	102.9	59.2	10.1	39	0	1
BRUNDAGE	102.6	60.3	9.3	37	0	9
WESTBRED 470 60#/A	101.6	59.7	9.9	36	0	5
MADSEN 45#/A	98.6	58.2	11.1	38	0	5
NUGAINES	98.3	60.3	8.0	37	0	0
123-T	97.6	59.0	9.9	52	15	0
MADSEN 60#/A	97.3	58.4	10.4	40	0	4
Q.HYBRID 1019	96.9	58.4	10.9	40	0	6
OR870082	95.0	58.9	10.0	37	0	2
WESTBRED 470 45#/A	94.6	59.6	10.9	37	0	8
WEATHERFORD (OR898120)	94.5	58.0	10.7	40	0	9
WESTBRED 470	92.1	59.6	9.8	38	0	1
WESTBRED 481	85.1	58.0	10.0	38	0	20
MADSEN-STEPHENS 50-50	84.6	57.9	9.9	39	0	7
MACVICAR	83.1	57.0	10.3	41	0	26
STEPHENS	78.0	55.9	10.1	37	0	20
CODA (WA7752)	108.3	61.3	9.6	46	10	0
TEMPLE (OR920054)	103.6	59.6	8.8	43	5	0
HILLER	103.4	57.5	9.4	40	0	1
RELY	99.7	58.8	9.0	44	4	1
TRES	99.2	59.2	9.2	43	0	2
ROHDE	94.9	59.2	10.1	40	0	0
ESTICA	107.9	55.7	10.0	41	0	1
NURSERY STATS						
MEAN	101.2	58.9	9.7			
CV %	8.3	1.0	7.7			
LSD @ .10	9.8	0.7	0.9			

PLANTED: 9/16/1997
HARVESTED: 8/12/1998
RECEIVED : 8/13/1998
PROCESSED: 8/14/1998

SAMPLE#	VARIETY	BREEDER#	CLASS	TWT	UWHRD	SKHRD	SKWT	SKSIZE	HPRDT	FYIELD
*0001	MADSEN		SWM	59.9	28	34.3 ± 12.7	37.5 ± 10.2	2.40 ± 0.50	12.9	71.0
*0002	CASHUP		SWM	61.9	16	29.7 ± 12.0	40.6 ± 8.4	2.50 ± 0.50	11.2	69.3
0003	123M EXPERIMENTAL		SWM	58.3	12	26.9 ± 12.4	37.6 ± 10.3	2.30 ± 0.50	12.1	64.7 -2
0004	123T EXPERIMENTAL		SWM	60.7	15	33.2 ± 12.3	38.6 ± 9.8	2.40 ± 0.50	12.6	67.3 -2
0005	WPB481		SWM	61.2	24	35.1 ± 13.2	44.0 ± 11.9	2.70 ± 0.60	11.9	71.0
0006	3-112 EXPERIMENTAL		SWM	64.3 +2	25	26.9 ± 15.0	56.4 ± 11.0	3.10 ± 0.50	14.0 -	64.1 -2
0007	STEPHENS		SWM	57.9 -	22	29.8 ± 11.6	43.8 ± 10.8	2.70 ± 0.50	13.0	68.8 -
0008	WPB470	IRRIGATED	SWM	64.4 +2	28	38.7 ± 11.8	49.9 ± 11.6	2.80 ± 0.60	9.7 +	66.9 -2
0009	WPB429		SWM	60.8	21	33.0 ± 14.0	30.3 ± 9.9	2.40 ± 0.50	11.7	69.0 -

* = standard mean nursery flour protein = 10.4 mill used = Quad (SM = standard mean NM = nursery mean NSD = nursery standard deviation)

SM	SWM	60.9	22						12.1	70.2
NM	SWM	61.0	21						12.1	68.0
NSD	SWM	2.28	5.8						1.23	2.48

SAMPLE#	VARIETY	BREEDER#	BYIELD	FASH	MSCOR	FPROT	FSV	MABS	MTYPE	COOI	TGS
*0001	MADSEN		48.0	0.44	83.5	11.5	19.9	57.7	1M	9.04	5
*0002	CASHUP		47.4	0.39	84.5	9.8	24.0	54.6	1M	9.32	5
0003	123M EXPERIMENTAL		44.4	0.43	76.1 -2	10.1	25.3	52.6 +	1M	9.16	5
0004	123T EXPERIMENTAL		43.4	0.38 +	82.6	10.7	25.3	53.1 +	1M	9.09	6
0005	WPB481		46.4	0.43	84.1	10.4	23.0	53.8	1M	9.10	6
0006	3-112 EXPERIMENTAL		40.2	0.37 +2	79.2 -2	11.9	24.0	56.6	3M	8.93	7 +
0007	STEPHENS		45.5	0.43	81.3 -	11.1	22.3	54.4	1M	9.18	5
0008	WPB470	IRRIGATED	41.4	0.40	80.8 -	8.5 +	26.4	52.5 +	3L	9.18	8 +2
0009	WPB429		48.0	0.42	82.2	9.7	24.0	52.8 +	1M	9.12	5

* = standard mean nursery flour protein = 10.4 mill used = Quad (SM = standard mean NM = nursery mean NSD = nursery standard deviation)

SM	SWM	47.7	0.41	84.0	10.6	22.0	56.2	9.18	5
NM	SWM	45.0	0.41	81.6	10.4	23.8	54.2	9.12	6
NSD	SWM	2.85	0.025	2.65	1.04	1.92	1.84	0.107	1.1

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9900146

SAMPLE#	VARIETY	BREEDER#	CLASS	TWT	UMHRD	WPROT	FYELD	BFYELD	FASH	MSCOR	FPROT
0001	101		SMW	59.1	30	11.6 +	71.9 -2	45.0	0.41 -	86.6 -2	10.4
0002	102		SMW	61.5	22	11.3 +	71.8 -2	47.2	0.41 -	86.4 -2	10.0 +
0003	108		SMW	61.4	24	11.5 +	72.2 -2	48.8	0.41 -	86.9 -2	9.8 +
0004	112		SMW	58.0 -	11	11.8	68.0 -2	44.8	0.42 -	81.0 -2	10.5
0005	123 M		SMW	57.7 -	9	12.3	67.7 -2	45.2	0.43 -2	79.9 -2	10.9
0006	123 MA		SMW	59.7	7	12.4	70.2 -2	44.0	0.41 -	84.4 -2	11.1
0007	123 T		SMW	60.9	11	12.4	71.0 -2	44.0	0.37	88.0 -2	11.2
0008	BZ6A90-470		SMW	63.7 +	22	13.1	71.0 -2	43.5	0.38	87.3 -2	11.4
0009	STEPHENS		SMW	60.2	25	12.1	72.2 -2	44.0	0.43 -2	85.7 -2	10.8
*0010	MADSEN		SMW	60.7	31	13.2	75.7	45.6	0.38	93.3	11.7
0011	CASHUP		SMW	61.8	13	11.5 +	71.2 -2	46.8	0.40 -	86.3 -2	10.1 +
0012	BASIN		SMW	58.8 -	6	11.2 +	70.2 -2	48.4	0.39	85.7 -2	10.4

* = standard mean nursery flour protein = 10.7 mill used = Quad (SM = standard mean NH = nursery mean NSD = nursery standard deviation)

SH	SMW	NH	SMW	NSD	SMW
	60.7	31	13.2	75.7	45.6
	60.3	18	12.0	71.1	45.6
	1.73	9.0	0.67	2.08	1.79
				0.40	0.38
				0.40	0.38
				0.020	3.38

SAMPLE#	VARIETY	BREEDER#	MABS	MTYPE	COOI	TGS
0001	101		55.9	2H	9.20	6
0002	102		54.6	2M	9.32 +	6
0003	108		54.3	2M	9.25	6
0004	112		54.1	2M	9.23	5
0005	123 H		55.1	2M	9.01	5
0006	123 MA		55.3	1H	8.90	7
0007	123 T		55.3	2M	9.26	8 +
0008	BZ6A90-470		56.3	3M	8.80	5
0009	STEPHENS		56.1	2M	8.91	6
*0010	MADSEN		56.6	1H	9.02	6
0011	CASHUP		55.1	2M	9.10	6
0012	BASIN		55.1	2M	9.27	8 +

* = standard mean nursery flour protein = 10.7 mill used = Quad (SM = standard mean NH = nursery mean NSD = nursery standard deviation)

SH	SMW	NH	SMW	NSD	SMW
	56.6	9.02	6		
	55.3	9.11	6		
	0.78	0.174	1.0		

USDA-ARS WESTERN WHEAT QUALITY LABORATORY
WHEAT ANALYSIS SYSTEM - DESCRIPTION OF ABBREVIATIONS

- %BFYIELD** Break flour yield (percentage flour from break rolls by weight of total products, short flow method)
- %BRAN** Bran recovered (percentage bran from break rolls by weight of the total products, short flow method)
- %MIDDS** Unground middling stock (percentage middlings from break rolls by weight of the total products, short flow method)
- %PFYIELD** Potential flour yield equal to break flour and unground middling stock (percentage by weight of the total products, short flow method)
- AOANC** Alkaline Noodle Color (ANC), a* Red-Green, Minolta Chroma meter reading, immediately after sheeting (0hr)
- AOUNC** Udon Noodle Color (UNC), a* Red-Green, Minolta Chroma meter reading, immediately after sheeting (0hr)
- A24ANC** Alkaline Noodle Color (ANC), a* Red-Green, Minolta Chroma meter reading, 24 hours after sheeting (24hr)
- A24UNC** Udon Noodle Color (UNC), a* Red-Green, Minolta Chroma meter reading, 24 hours after sheeting (24hr)
- AWRC** Alkaline water retention capacity. See METHODS
- BOANC** Alkaline Noodle Color (ANC), b* Yellow-Blue, Minolta Chroma meter reading, immediately after sheeting (0hr)
- BOUNC** Udon Noodle Color (UNC), b* Yellow-Blue, Minolta Chroma meter reading, immediately after sheeting (0hr)
- B24ANC** Alkaline Noodle Color (ANC), b* Yellow-Blue, Minolta Chroma meter reading, 24 hours after sheeting (24hr)
- B24UNC** Udon Noodle Color (UNC), b* Yellow-Blue, Minolta Chroma meter reading, 24 hours after sheeting (24hr)
- BABS** Bake water absorption (percentage by weight, corrected to 14% moisture basis)
- BCRGR** Bread crumb grain rating code.
- BFYIELD** Break flour yield (percentage flour from break rolls by weight of total products)
- BREEDER#** Plot or bag number within a nursery, or other identifier
- CAVOL** Japanese sponge cake volume (cc)

CLASS Market class or subclass abbreviation which includes grain hardness, color, and season planted

CNCOL Cooked noodle color score, Udon

CODI Cookie diameter (cm)

DSI Cibacron blue dye test for alpha-amylase

FABS Farinograph water absorption (percentage by weight, corrected to 14% moisture basis)

FASH Flour ash (percentage by weight, corrected to 14% moisture basis)

FMIST Flour moisture (percentage by weight).

FN Falling number test for sprout damage

FPEAK Farinograph mixing peak time (minutes)

FPROT Flour protein (percentage by weight, corrected to 14% moisture basis)

FSTAB Frinograph stability time (minutes)

FSV Flour Swelling Volume (mL/g).

FYIELD Flour yield (percentage flour by weight of total products)

LOANC Alkaline Noodle Color (ANC), L* Brightness, Minolta Chroma meter reading, immediately after sheeting (0hr)

LOUNC Udon Noodle Color (UNC), L* Brightness, Minolta Chroma meter reading, immediately after sheeting (0hr)

L24ANC Alkaline Noodle Color (ANC), L* Brightness, Minolta Chroma meter reading, 24 hours after sheeting (24hr)

L24UNC Udon Noodle Color (UNC), L* Brightness, Minolta Chroma meter reading, 24 hours after sheeting (24hr)

LECOFPROT Flour protein content.

LECOWPROT Wheat protein content.

LOCATION Location sample was grown

LVOL Bread loaf volume (cc)

MABS Mixograph absorption (percentage by weight, corrected to 14% moisture basis)

MSCOR Milling score.

MTI Farinograph mixing tolerance index.

MTIME Optimum mixing time for bread dough (minutes)

MTYPE Mixograph type. NIRFMIST Flour moisture.

NIRFPROT Flour Protein.

NIRWPROT Wheat Protein.

NOSCOR Noodle score, Udon (scale 1-100).

NURSERY Nursery number (located in the upper left corner of the reports)

NYIELD Noodle yield, Udon (weighted score assigned to WTIN)

OVENFMIST Flour moisture.

OVENWMIST Wheat moisture.

PKCOLOR Alkaline flour color rating.

PROQ Protein quality. See Interpretation of Data

RNCOL Raw noodle color score, Udon.

RVA Rapid Visco-Analyzer (peak starch paste viscosity, centipoise X 12)

SAMPLE# Sample number

SCSCOR Sponge cake score (scale 1-100).

SKCLASS Single kernel class identification

SKHRD Single kernel hardness

SKSIZE Single kernel size

SKWMIST Single kernel moisture

SKWT Single kernel weight

TEXTNO Cooked noodle texture score, Udon.

TGS Cookie top grain score (scale 0-10).

TWT Test weight (lbs/bu, after cleaning)

UWHRD Udy cyclone mill wheat grain hardness (NIR value, dimensionless)

VARIETY Variety name, state number or unique identifying number

VISC Predicted McMichael viscosity (observed modified Brookfield viscosity x 7.5)

WMIST Wheat moisture (percentage by weight)

WPROT Wheat protein (percentage by weight, corrected to 12% moisture basis)

WTIN Noodle weight increase, Udon (percentage water uptake after cooking)

U.S. DEPARTMENT OF AGRICULTURE
 AGRICULTURAL MARKETING SERVICE

The following statements are made in accordance with the Privacy Act of 1974 (5 U.S.C. 552a) and the Paperwork Reduction Act (PRA) of 1995.

EXHIBIT E
STATEMENT OF THE BASIS OF OWNERSHIP

Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). Information is held confidential until certificate is issued (7 U.S.C. 2426).

1. NAME OF APPLICANT(S) Genex Harvest States Wheeler Branch and Grant H. Torrey, Jr. for CHS, Inc. MAY 9/17/04	2. TEMPORARY DESIGNATION OR EXPERIMENTAL NUMBER 123-M	3. VARIETY NAME Albion
4. ADDRESS (Street and No., or R.F.D. No., City, State, and ZIP, and Country) 3132 Road "O" N.E. Moses Lake, Wa. 98837	5. TELEPHONE (include area code) (509) 765-3898	6. FAX (include area code) (509)765-8684
7. PVPO NUMBER 9900146		

8. Does the applicant own all rights to the variety? Mark an "X" in appropriate block. If no, please explain. YES NO

9. Is the applicant (individual or company) a U.S. national or U.S. based company? YES NO
 If no, give name of country

10. Is the applicant the original owner? YES NO *If no, please answer one of the following:*

a. If original rights to variety were owned by individual(s), is (are) the original owner(s) a U.S. national(s)?
 YES NO *If no, give name of country*

b. If original rights to variety were owned by a company(ies), is(are) the original owner(s) a U.S. based company?
 YES NO *If no, give name of country*

11. Additional explanation on ownership (if needed, use reverse for extra space):

 Grant H. Torrey, Jr. is an employee of Cenex Harvest States-Wheeler Branch

PLEASE NOTE:

Plant variety protection can be afforded only to owners (not licensees) who meet one of the following criteria:

1. If the rights to the variety are owned by the original breeder, that person must be a U.S. national, national of a UPOV member country, or national of a country which affords similar protection to nationals of the U.S. for the same genus and species.
2. If the rights to the variety are owned by the company which employed the original breeder(s), the company must be U.S. based, owned by nationals of a UPOV member country, or owned by nationals of a country which affords similar protection to nationals of the U.S. for the same genus and species.
3. If the applicant is an owner who is not the original owner, both the original owner and the applicant must meet one of the above criteria.

The original breeder/owner may be the individual or company who directed final breeding. See Section 41(a)(2) of the Plant Variety Protection Act for definition.

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